

Gly Gln Gly Leu Asn Gly Met Gln Asp Asn Trp Asn Ala Pro Ile Ser  
           35                          40                          45  
 Leu Ala Asp Thr Asp Pro Val Ile Pro Gly Ala Gly Arg Asp Leu Glu  
           50                          55                          60  
 Ala Leu Val Ile Cys Arg Val Asn Gly Glu Gly Arg Gly Lys Gly Leu  
           65                          70                          75                          80  
 Leu Gly Gly Lys Thr Gly Cys Arg Gly Glu Ala Glu Gly Gly Gly Ala  
                           85                          90                          95  
 Glu Ala Ala Gly Leu Cys Leu Trp  
                           100

<210> 4124

<211> 138

<212> PRT

<213> Homo sapiens

<400> 4124

Met Pro Asp Cys Arg Arg Tyr Gln Gln Pro Val Glu Lys Leu His Gln  
           1                          5                          10                          15  
 Cys Trp Gly Ser Tyr Phe Asn Tyr Ser Arg Lys Ile His Phe Leu Leu  
                           20                          25                          30  
 Ser Val Trp Phe His Leu Gly Leu Thr Ser Phe Leu Ala Gly Pro Arg  
           35                          40                          45  
 Phe Val Lys Ser Ile Leu Ile Ser Arg Ile Ile Leu Ala Asn Ser Leu  
           50                          55                          60  
 Pro Arg Phe Ser Phe Pro Ser Phe Gly Gln Leu Ala Trp Phe Val Leu  
           65                          70                          75                          80  
  
 Leu Ile Ser Glu Met Arg Cys Asp Asn Lys Arg Gln Arg Asn Lys Ser  
                           85                          90                          95  
 Met Phe Leu Ala Phe Gly Phe Arg Ser Cys Pro Tyr Gly Lys Glu Lys  
                           100                          105                          110  
 Thr Asn Lys Cys Gly Ile Asp Lys Ile Phe Gly Arg Lys Asp Asn Lys  
           115                          120                          125  
 Ser Arg Lys Glu Phe Leu Arg Gly Arg Lys

130

135

&lt;210&gt; 4125

&lt;211&gt; 234

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4125

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Gly | Ser | Arg | Arg | Asp | Cys | Arg | Met | Tyr | Ala | Thr | Ala | Thr | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Gly | Phe | Ser | Gly | Leu | Pro | Trp | Ala | Val | His | His | Pro | Leu | His | Ser |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Ser | His | Cys | Tyr | Pro | Thr | Ser | Ala | Val | Arg | Ser | Pro | Arg | Ala | His |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Ser | Ala | Gln | Pro | Pro | Ser | Ser | Val | Pro | Ser | Gly | Pro | Phe | Thr | Pro | Cys |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Asp | Asn | Ser | Arg | Cys | Cys | Leu | Gly | Ser | Trp | Gly | Thr | Pro | Asp | Pro | Ser |
| 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |     |
| Ser | His | Gly | Ile | Ser | Ser | Arg | His | Ala | Gly | Gln | Ala | Gly | Pro | Met | Ala |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Leu | His | Leu | Ser | Pro | Ala | Ala | Trp | Gly | Cys | Pro | Val | Gly | Ala | Asp | Thr |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |
| Thr | Ser | Leu | Pro | Phe | Gly | Pro | Leu | Pro | Arg | Thr | His | Cys | Met | Pro | Gly |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Trp | Gly | Asp | Gly | Gly | Arg | Glu | Lys | Ser | Gly | Arg | Phe | Pro | Ser | Trp | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Gly | Ser | Ala | Arg | Ala | Gly | Arg | Cys | Pro | Gly | Met | Thr | Ile | Pro | Asp | Ser |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Gln | Asn | His | Leu | Pro | Ala | Val | Gly | Trp | Gly | Ser | Pro | Gln | Arg | Ala | His |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Pro | Tyr | Ser | Gln | Ser | Arg | Asp | Glu | Gly | Ser | Cys | Gly | Pro | Arg | Arg | Trp |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ala | Lys | Arg | Arg | Thr | Gly | Ser | Trp | Met | Gln | Ser | Gly | Val | Ser | Gly | Ala |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |
| Pro | Gly | Gln | Arg | His | Arg | Ala | Tyr | Trp | Gly | Gln | Gly | Trp | Gly | Glu | Met |

210 215 220  
 Gly Leu Ser Pro Arg Asp Leu Gly Arg Ser  
 225 230

<210> 4126  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 4126  
 Met Glu Pro Arg Ser Gly Gly Leu Arg Ser His Lys Ala Tyr Ala Cys  
 1 5 10 15  
 Ile Phe Leu Arg Glu Pro Thr Glu Glu Arg Glu Met Ala Lys Thr Arg  
 20 25 30  
 Arg Asp Arg Trp Met Thr Thr Ser Ala Gly Gln Lys Thr Thr Leu Ile  
 35 40 45  
 Ala Phe Met Arg Met Thr Ala Ser Pro Ser Gln Lys Ala Thr Leu Ile  
 50 55 60  
 Ala Ser Met Arg Met Thr Ala Ser Pro Gly Gln Lys Thr Thr Leu Ile  
 65 70 75 80  
 Ala Ser Met Ser Ser Pro Trp Gly Ile His Gly Glu Asp Ile Phe Glu  
 85 90 95  
 Gly Glu Ile Pro Asn Ala Ser  
 100

<210> 4127  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 4127  
 Met Arg Pro Ser Met Ile Trp Val Leu Ser Ala Ser Pro Ala Ser Pro  
 1 5 10 15  
 Asp Val Pro Gly Gly Ser Ala Leu Val Asn Pro Cys Ser Leu Leu Ala

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
|     |     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |  |  |
| Thr | Arg | Cys | Ser | Leu | Arg | Pro | Leu | Pro | Thr | Thr | Gln | Asn | Ala | Ile | Tyr |  |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |  |  |
| Leu | Leu | Pro | Ser | Thr | Leu | Pro | Pro | Cys | Pro | Arg | Pro | Ile | Pro | Ile | Pro |  |  |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |  |
| Gln | Leu | Thr | Ser | Cys | Pro | Phe | Ile | Lys | Ile | Ala | Leu | Ala | Met | Pro | Ser |  |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |  |
| Gln | Glu | Ile | Ser | Asn | Pro | Tyr | Gly | Leu | Leu | Gly | Ala | Pro | Leu | Leu | Glu |  |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |  |  |
| Ala | Ala | Lys | Asp | Thr | Asp | Leu | Phe | Ser | Arg | Cys | Ala | Trp | Ile |     |     |  |  |
|     |     | 100 |     |     |     |     | 105 |     |     |     |     |     | 110 |     |     |  |  |

<210> 4128

&lt;211&gt; 104

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4128

[illegible]

&lt;210&gt; 4129



&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4129

Met Pro Ser Arg Cys Pro Gly Pro His Pro Ser Ala Arg His Pro Pro  
 1 5 10 15  
 Ser Gly Leu Pro Gly Leu Leu Gly Ser Pro Val Phe Pro Asp Arg Gln  
 20 25 30  
 Gly Leu Asp Val Pro Ser Gln Pro Ala Pro Gly Pro Thr Cys Arg Ser  
 35 40 45  
 Tyr Pro Asn Ala Leu Arg Ser Pro Ala Leu Pro Leu Cys Phe His Pro  
 50 55 60  
 Pro Ser Phe Leu Met Val Phe Phe Leu Pro His Cys Leu Ser Leu Cys  
 65 70 75 80  
 Leu Ser Val Leu Ser Val Pro Ser Pro Pro Val Ser Pro Ser Ala Leu  
 85 90 95  
 Tyr Gly Pro Leu Val Ser Leu Ser Thr Ser Leu Tyr His His Val Ile  
 100 105 110  
 Ser Val Ser Leu Ser Val Ser Ile Ser Pro Cys Leu Cys Leu Leu Cys  
 115 120 125  
 Leu Ile Phe Leu  
 130

&lt;210&gt; 4130

&lt;211&gt; 117

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4130

Met Asn Lys Ile Arg Leu Ser Leu Lys Arg Asn Tyr Lys Lys Glu Leu  
 1 5 10 15  
 Arg Pro Gly Val Met Ala His Ala Gly Asn Pro Ser Thr Leu Gly Gly  
 20 25 30  
 Gln Gly Ser Trp Ile Met Arg Ser Gly Val Arg Asp Gln Pro Gly Gln

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
|     | 35  |     | 40  |     | 45  |     |
| His | Gly | Glu | Thr | Ser | Ser | Leu |
|     | 50  |     |     |     | 55  |     |
| Gly | Gly | Met | Pro | Val | Phe | Pro |
|     | 65  |     |     |     | 70  |     |
| Ser | Leu | Glu | Pro | Arg | Arg | Trp |
|     |     |     |     |     | 85  |     |
| Leu | His | Ser | Ser | Leu | Gly | Asp |
|     |     |     |     |     | 100 |     |
| Ala | Glu | Met | Lys | Phe |     |     |
|     |     |     |     |     | 115 |     |

&lt;210&gt; 4131

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4131

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Met | Pro | Gly | Met | Ala | Thr | Leu | Met | Ala | Asp | Ser | Met | Cys | Asp | Asp |
|     | 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |
| Ser | Tyr | Ser | Ser | Cys | Gly | Arg | Gln | Ser | Ile | Ser | Ser | Ser | Arg | Ser | Leu |
|     |     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |
| Pro | Ser | Ser | Ser | Cys | Ser | Leu | Ser | His | Ala | Thr | Val | Leu | Leu | Ile | Ala |
|     |     |     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |
| Ile | Ser | Asp | Ala | Lys | Gly | Thr | Gly | Leu | Ser | Val | Ser | Ile | Met | Gly | Val |
|     |     |     |     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |
| Glu | Leu | Arg | Glu | Arg | Ala | Gly | Cys | Leu | Pro | Asp | Ala | Pro | Arg | Gly | Arg |
|     |     |     |     |     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |
| His | Arg | Pro | Ser | Ala | Pro | Arg | Ala | Lys | Leu | Pro | Leu | Ser | Glu | Arg | Gly |
|     |     |     |     |     | 85  |     |     |     | 90  |     |     |     |     | 95  |     |
| Leu | Ile | Pro | Pro | Arg | Leu | Thr | Gln | Ala | Glu | Ala | Ser | Gly | Trp | Gly | Arg |
|     |     |     |     |     | 100 |     |     |     | 105 |     |     |     |     | 110 |     |
| Arg | Asp | Arg | Ser | Lys | Ala | Gly | Gly | Ser | Leu | Cys | Thr | Gln | Leu | Gln | Pro |
|     |     |     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |
| Leu | Ala | Leu | Ser | Val | Asn | Glu | Ser | Leu | Ser | Met | Lys | Leu | Pro | Arg |     |

130

135

140

&lt;210&gt; 4132

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4132

Met Glu Ala Ser Pro Tyr Leu Glu Gly Pro Leu Ser Gly Arg Pro Cys  
 1 5 10 15  
 Trp Leu His Arg Gly Gly Ser Glu Asp Asn Pro Ser Leu Gly Gly Ala  
 20 25 30  
 His His Cys Cys Leu Gly His Ser Gln Glu Cys Tyr Ser Arg Pro Thr  
 35 40 45  
 Ala Gly His Leu Ala Gly Thr Gly Ser Pro Arg Ile Trp Pro Arg Trp  
 50 55 60  
 Gly Arg Val Pro Pro Arg Ser Phe Ser Leu Ser Ser Ala Ser Val Pro  
 65 70 75 80  
 Ser Pro His Leu Leu Cys Thr Arg Ile Thr Ala Ser Arg Glu Arg Met  
 85 90 95  
 Ala Leu Arg Leu Gly Phe Cys Phe Gln Pro Ser Ser Glu Arg Gly Ser  
 100 105 110  
 Thr Tyr Arg Lys Gln Tyr Ile Ser His Gln Ser Leu Arg Asp Pro Gln  
 115 120 125  
 Ala Gln Leu Thr Pro Thr Pro Gly Ala Pro Ala Phe  
 130 135 140

&lt;210&gt; 4133

&lt;211&gt; 208

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4133

Met Gly Ser Cys Ser Gly Arg Cys Ala Leu Val Val Leu Cys Ala Phe  
 1 5 10 15  
 Gln Leu Val Ala Ala Leu Glu Arg Gln Val Phe Asp Phe Leu Gly Tyr  
 20 25 30  
 Gln Trp Ala Pro Ile Leu Ala Asn Phe Val His Ile Ile Ile Val Ile  
 35 40 45  
 Leu Gly Leu Phe Gly Thr Ile Gln Tyr Arg Leu Arg Tyr Val Met Val  
 50 55 60  
 Tyr Thr Leu Trp Ala Ala Val Trp Val Thr Trp Asn Val Phe Ile Ile  
 65 70 75 80  
 Cys Phe Tyr Leu Glu Val Gly Gly Leu Leu Gln Asp Ser Glu Leu Leu  
 85 90 95  
 Thr Phe Ser Leu Ser Arg His Arg Ser Trp Trp Arg Glu Arg Trp Pro  
 100 105 110  
 Gly Cys Leu His Glu Glu Val Pro Ala Val Gly Leu Gly Ala Pro His  
 115 120 125  
 Gly Gln Ala Leu Val Ser Gly Ala Gly Cys Ala Leu Glu Pro Ser Tyr  
 130 135 140  
 Val Glu Ala Leu His Ser Gly Leu Gln Ile Leu Ile Ala Leu Leu Gly  
 145 150 155 160  
 Phe Val Cys Gly Cys Gln Val Val Ser Val Phe Thr Glu Glu Glu Asp  
 165 170 175  
 Ser Phe Asp Phe Ile Gly Gly Phe Asp Pro Phe Pro Leu Tyr His Val  
 180 185 190  
 Asn Glu Lys Pro Ser Ser Leu Leu Ser Lys Gln Val Tyr Leu Pro Ala  
 195 200 205

<210> 4134

<211> 159

<212> PRT

<213> Homo sapiens

<400> 4134

Met Cys Val Arg Arg Ser Leu Val Gly Leu Thr Phe Cys Thr Cys Tyr  
 1 5 10 15

Leu Ala Ser Tyr Leu Thr Asn Lys Tyr Val Leu Ser Val Leu Lys Phe  
                   20                                  25                                  30  
 Thr Tyr Pro Thr Leu Phe Gln Gly Trp Gln Thr Leu Ile Gly Gly Leu  
                   35                                  40                                  45  
 Leu Leu His Val Ser Trp Lys Leu Gly Trp Val Glu Ile Asn Ser Ser  
                   50                                  55                                  60  
 Ser Arg Ser His Val Leu Val Trp Leu Pro Ala Ser Val Leu Phe Val  
                   65                                  70                                  75                                  80  
 Gly Ile Ile Tyr Ala Gly Ser Arg Ala Leu Ser Arg Leu Ala Ile Pro  
                                   85                                  90                                  95  
 Val Phe Leu Thr Leu His Asn Val Ala Glu Val Ile Ile Cys Gly Tyr  
                                   100                                  105                                  110  
 Gln Lys Cys Phe Gln Lys Glu Lys Thr Ser Pro Ala Lys Ile Cys Ser  
                   115                                  120                                  125  
 Ala Leu Phe Leu Leu Ala Ala Ala Gly Cys Leu Pro Phe Asn Asp Ser  
                   130                                  135                                  140  
 Gln Gly Leu Ile Lys Phe Tyr Arg Ser Pro Arg Asn Pro Val His  
                   145                                  150                                  155

<210> 4135

<211> 942

<212> PRT

<213> Homo sapiens

<400> 4135

Met Glu Arg Leu Leu Arg Arg Ile Asn Arg Thr Val Ile Gly Met Asn  
           1                                  5                                  10                                  15  
 Arg Gln Ser Pro His Ile Gly Ser Phe Val Ala Cys Met Ile Ala Leu  
                   20                                  25                                  30  
  
 Leu Gln Gln Met Asp Asp Ser His Tyr Ser His Tyr Ile Ser Thr Phe  
                   35                                  40                                  45  
 Lys Thr Arg Gln Asp Ile Ile Asp Phe Leu Leu Glu Thr Phe Ile Met  
                   50                                  55                                  60  
 Phe Lys Asp Leu Ile Gly Lys Asn Val Tyr Ala Lys Asp Trp Met Val

|   |     |     |     |
|---|-----|-----|-----|
| 65  | 70  | 75  | 80  |
| Met Asn Met Thr Gln Asn Arg Val Phe Leu Arg Ala Ile Asn Gln Phe |     |     |     |
|   | 85  | 90  | 95  |
| Ala Glu Val Leu Thr Arg Phe Phe Met Asp Gln Ala Ser Phe Glu Leu |     |     |     |
|   | 100 | 105 | 110 |
| Gln Leu Trp Asn Asn Tyr Phe His Leu Ala Val Ala Phe Leu Thr His |     |     |     |
|   | 115 | 120 | 125 |
| Glu Ser Leu Gln Leu Glu Thr Phe Ser Gln Ala Lys Arg Asn Lys Ile |     |     |     |
|   | 130 | 135 | 140 |
| Val Lys Lys Tyr Gly Asp Met Arg Lys Glu Ile Gly Phe Arg Ile Arg |     |     |     |
| 145   | 150 | 155 | 160 |
| Asp Met Trp Tyr Asn Leu Gly Pro His Lys Ile Lys Phe Ile Pro Ser |     |     |     |
|   | 165 | 170 | 175 |
| Met Val Gly Pro Ile Leu Glu Val Thr Leu Thr Pro Glu Val Glu Leu |     |     |     |
|   | 180 | 185 | 190 |
| Arg Lys Ala Thr Ile Pro Ile Phe Phe Asp Met Met Gln Cys Glu Phe |     |     |     |
|   | 195 | 200 | 205 |
| Asn Phe Ser Gly Asn Gly Asn Phe His Met Phe Glu Asn Glu Leu Ile |     |     |     |
|   | 210 | 215 | 220 |
| Thr Lys Leu Asp Gln Glu Val Glu Glu Gly Arg Gly Asp Glu Gln Tyr |     |     |     |
| 225   | 230 | 235 | 240 |
| Lys Val Leu Leu Glu Lys Leu Leu Leu Glu His Cys Arg Lys His Lys |     |     |     |
|   | 245 | 250 | 255 |
| Tyr Leu Ser Ser Ser Gly Glu Val Phe Ala Leu Leu Val Ser Ser Leu |     |     |     |
|   | 260 | 265 | 270 |
| Leu Glu Asn Leu Leu Asp Tyr Arg Thr Ile Ile Met Gln Asp Glu Ser |     |     |     |
|   | 275 | 280 | 285 |
| Lys Glu Asn Arg Met Ser Cys Thr Val Asn Val Leu Asn Phe Tyr Lys |     |     |     |
|   | 290 | 295 | 300 |
| Glu Lys Lys Arg Glu Asp Ile Tyr Ile Arg Tyr Leu Tyr Lys Leu Arg |     |     |     |
| 305   | 310 | 315 | 320 |
| Asp Leu His Arg Asp Cys Glu Asn Tyr Thr Glu Ala Ala Tyr Thr Leu |     |     |     |
|   | 325 | 330 | 335 |
| Leu Leu His Ala Glu Leu Leu Gln Trp Ser Asp Lys Pro Cys Val Pro |     |     |     |
|   | 340 | 345 | 350 |
| His Leu Leu Gln Arg Asp Ser Tyr Tyr Val Tyr Thr Gln Gln Glu Leu |     |     |     |

|   |     |     |
|---|-----|-----|
| 355   | 360 | 365 |
| Lys Glu Lys Leu Tyr Gln Glu Ile Ile Ser Tyr Phe Asp Lys Gly Lys |     |     |
| 370   | 375 | 380 |
| Met Trp Glu Lys Ala Ile Lys Leu Ser Lys Glu Leu Ala Glu Thr Tyr |     |     |
| 385   | 390 | 395 |
| Glu Ser Lys Val Phe Asp Tyr Glu Gly Leu Gly Asn Leu Leu Lys Lys |     |     |
| 405   | 410 | 415 |
| Arg Ala Ser Phe Tyr Glu Asn Ile Ile Lys Ala Met Arg Pro Gln Pro |     |     |
| 420   | 425 | 430 |
| Glu Tyr Phe Ala Val Gly Tyr Tyr Gly Gln Gly Phe Pro Ser Phe Leu |     |     |
| 435   | 440 | 445 |
| Arg Asn Lys Ile Phe Ile Tyr Arg Gly Lys Glu Tyr Glu Arg Arg Glu |     |     |
| 450   | 455 | 460 |
| Asp Phe Ser Leu Arg Leu Leu Thr Gln Phe Pro Asn Ala Glu Lys Met |     |     |
| 465   | 470 | 475 |
| Thr Ser Thr Thr Pro Pro Gly Glu Asp Ile Lys Ser Ser Pro Lys Gln |     |     |
| 485   | 490 | 495 |
| Tyr Met Gln Cys Phe Thr Val Lys Pro Val Met Ser Leu Pro Pro Ser |     |     |
| 500   | 505 | 510 |
| Tyr Lys Asp Lys Pro Val Pro Glu Gln Ile Leu Asn Tyr Tyr Arg Ala |     |     |
| 515   | 520 | 525 |
| Asn Glu Val Gln Gln Phe Arg Tyr Ser Arg Pro Phe Arg Lys Gly Glu |     |     |
| 530   | 535 | 540 |
| Lys Asp Pro Asp Asn Glu Phe Ala Thr Met Trp Ile Glu Arg Thr Thr |     |     |
| 545   | 550 | 555 |
| Tyr Thr Thr Ala Tyr Thr Phe Pro Gly Ile Leu Lys Trp Phe Glu Val |     |     |
| 565   | 570 | 575 |
| Lys Gln Ile Ser Thr Glu Glu Ile Ser Pro Leu Glu Asn Ala Ile Glu |     |     |
| 580   | 585 | 590 |
| Thr Met Glu Leu Thr Asn Glu Arg Ile Ser Asn Cys Val Gln Gln His |     |     |
| 595   | 600 | 605 |
| Ala Trp Asp Arg Ser Leu Ser Val His Pro Leu Ser Met Leu Leu Ser |     |     |
| 610   | 615 | 620 |
| Gly Ile Val Asp Pro Ala Val Met Gly Gly Phe Ser Asn Tyr Glu Lys |     |     |
| 625   | 630 | 635 |
| Ala Phe Phe Thr Glu Lys Tyr Leu Gln Glu His Pro Glu Asp Gln Glu |     |     |

|             |   |                     |             |     |     |
|-------------|---|---------------------|-------------|-----|-----|
|             | 645                                     |                     | 650         |     | 655 |
| Lys Val Glu | Leu Leu Lys Arg Leu Ile                 | Ala Leu Gln Met     | Pro Leu Leu |     |     |
|             | 660                                     |                     | 665         |     | 670 |
| Thr Glu Gly | Ile Arg Ile His Gly Glu Lys Leu Thr     | Glu Gln Leu Lys     |             |     |     |
|             | 675                                     |                     | 680         |     | 685 |
| Pro Leu His | Glu Arg Leu Ser Ser Cys Phe Arg         | Glu Leu Lys Glu Lys |             |     |     |
|             | 690                                     |                     | 695         |     | 700 |
| Val Glu Lys | His Tyr Gly Val Ile Thr Leu Pro Pro     | Asn Leu Thr Glu     |             |     |     |
| 705         |   | 710                 |             | 715 | 720 |
| Arg Lys Gln | Ser Arg Thr Gly Ser Ile Val Leu Pro Tyr | Ile Met Ser         |             |     |     |
|             | 725                                     |                     | 730         |     | 735 |
| Ser Thr Leu | Arg Arg Leu Ser Ile Thr Ser Val Thr     | Ser Ser Val Val     |             |     |     |
|             | 740                                     |                     | 745         |     | 750 |
| Ser Thr Ser | Ser Asn Ser Ser Asp Asn Ala Pro Ser     | Arg Pro Gly Ser     |             |     |     |
|             | 755                                     |                     | 760         |     | 765 |
| Asp Gly Ser | Ile Leu Glu Pro Leu Leu Glu Arg Arg     | Ala Ser Ser Gly     |             |     |     |
|             | 770                                     |                     | 775         |     | 780 |
| Ala Arg Val | Glu Asp Leu Ser Leu Arg Glu Glu Asn Ser | Glu Asn Arg         |             |     |     |
| 785         |   | 790                 |             | 795 | 800 |
| Ile Ser Lys | Phe Lys Arg Lys Asp Trp Ser Leu Ser Lys | Ser Gln Val         |             |     |     |
|             | 805                                     |                     | 810         |     | 815 |
| Ile Ala Glu | Lys Ala Pro Glu Pro Asp Leu Met Ser Pro | Thr Arg Lys         |             |     |     |
|             | 820                                     |                     | 825         |     | 830 |
| Ala Gln Arg | Pro Lys Ser Leu Gln Leu Met Asp Asn Arg | Leu Ser Pro         |             |     |     |
|             | 835                                     |                     | 840         |     | 845 |
| Phe His Gly | Ser Ser Pro Pro Gln Ser Thr Pro Leu Ser | Pro Pro Pro         |             |     |     |
|             | 850                                     |                     | 855         |     | 860 |
| Leu Thr Pro | Lys Ala Thr Arg Thr Leu Ser Ser Pro Ser | Leu Gln Thr         |             |     |     |
| 865         |   | 870                 |             | 875 | 880 |
| Asp Gly Ile | Ala Ala Thr Pro Val Pro Pro Pro Pro Pro | Lys Ser             |             |     |     |
|             | 885                                     |                     | 890         |     | 895 |
| Lys Pro Tyr | Glu Gly Ser Gln Arg Ser Ser Thr Glu Leu | Ala Pro Pro         |             |     |     |
|             | 900                                     |                     | 905         |     | 910 |
| Leu Pro Val | Arg Arg Glu Ala Lys Ala Pro Pro Pro Pro | Pro Pro Lys         |             |     |     |
|             | 915                                     |                     | 920         |     | 925 |
| Ala Arg Lys | Ser Gly Ile Pro Thr Ser Glu Pro Gly Ser | Gln                 |             |     |     |



930

935

940

&lt;210&gt; 4136

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4136

Met Ala His Leu Arg Asp His Pro Phe Ser Asn Thr Arg Leu Pro Lys

1

5

10

15

Pro Trp His Arg Asp Gly Cys Leu Gly Trp Pro Arg Arg Asp Ser Arg

20

25

30

Ser Val Leu Cys Gly Asp Leu Leu Ser Ala Gln Lys Leu Val Leu Thr

35

40

45

Leu Pro Leu Thr Gly Val Trp Cys Phe Trp Ser Gly Leu Phe Leu Gln

50

55

60

Gly Cys Pro Ser Val Ser Val Pro Met Gly Val Cys Pro Ala Cys Ser

65

70

75

80

Tyr Arg Glu Gln Asp Cys Trp Ala Pro Gly Met Arg Ala Arg Gly Trp

85

90

95

Pro Asn Thr Glu Trp Leu Pro Ala Val Ile Leu Ser Val Leu Phe Pro

100

105

110

Pro Gln Ser Ser Trp Gln Glu Ser Val Leu Leu Ala Ala Phe Phe Val

115

120

125

Arg Ile Tyr Trp Asp Leu Phe Lys Val Pro Trp Gly Pro Arg Arg Leu

130

135

140

&lt;210&gt; 4137

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4137

Met Leu Phe Phe Phe Phe Phe Phe Phe Phe Glu Met Glu Ser Cys Phe

|   |     |     |    |
|---|-----|-----|----|
| 1   | 5   | 10  | 15 |
| Val Ala Gln Ala Glu Val Gln Trp His Asp Leu Gly Ser Leu Leu Pro |     |     |    |
| 20  | 25  | 30  |    |
| Leu Pro Pro Gly Phe Lys Gln Phe Phe Cys Leu Ser Leu Pro Ser Ser |     |     |    |
| 35  | 40  | 45  |    |
| Trp Asp Cys Arg Cys Ala Pro Thr Cys Thr Thr Val Gln Ile Pro Gly |     |     |    |
| 50  | 55  | 60  |    |
| Cys Leu Phe Ser Gly Asp Gly Val Ser Pro Cys Trp Pro Gly Trp Ser |     |     |    |
| 65  | 70  | 75  | 80 |
| Arg Thr Pro Asp Leu Arg Trp Ser Thr Cys Phe Ser Leu Pro Gly Cys |     |     |    |
| 85  | 90  | 95  |    |
| Trp Asn Cys Arg Cys Glu Pro Pro Cys Gln Thr Asp Ala Phe Tyr Val |     |     |    |
| 100   | 105 | 110 |    |

&lt;210&gt; 4138

&lt;211&gt; 531

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4138

|   |     |     |    |
|---|-----|-----|----|
| Met Leu Lys Leu Ile Pro Pro His Ala Arg Glu Ala Gly Thr Arg Gly |     |     |    |
| 1   | 5   | 10  | 15 |
| Gly Thr Asp Thr Ala Gly Glu Pro Thr Pro Glu Val Arg Pro Gly Asp |     |     |    |
| 20  | 25  | 30  |    |
| Val His Ser His Ile Pro Lys Ala His Gly Met Arg Ser Ala Trp Val |     |     |    |
| 35  | 40  | 45  |    |
| Thr Leu Gly Leu Cys Pro Pro Arg Gln Glu Pro Ala Leu Cys Thr Leu |     |     |    |
| 50  | 55  | 60  |    |
| Cys Ala Cys Pro Ser Gly Arg Pro Ser Met Arg Gly Pro Ala Val Leu |     |     |    |
| 65  | 70  | 75  | 80 |
| Leu Thr Val Ala Leu Ala Thr Leu Leu Ala Pro Gly Ala Gly Ala Pro |     |     |    |
| 85  | 90  | 95  |    |
| Val Gln Ser Gln Gly Ser Gln Asn Lys Leu Leu Leu Val Ser Phe Asp |     |     |    |
| 100   | 105 | 110 |    |
| Gly Phe Arg Trp Asn Tyr Asp Gln Asp Val Asp Thr Pro Asn Leu Asp |     |     |    |

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Ala Met Ala Arg Asp Gly Val Lys Ala Arg Tyr Met Thr Pro Ala Phe |     |     |
| 130   | 135 | 140 |
| Val Thr Met Thr Ser Pro Cys His Phe Thr Leu Val Thr Gly Lys Tyr |     |     |
| 145   | 150 | 155 |
| Ile Glu Asn His Gly Val Val His Asn Met Tyr Tyr Asn Thr Thr Ser |     |     |
| 165   | 170 | 175 |
| Lys Val Lys Leu Pro Tyr His Ala Thr Leu Gly Ile Gln Arg Trp Trp |     |     |
| 180   | 185 | 190 |
| Asp Asn Gly Ser Val Pro Ile Trp Ile Thr Ala Gln Arg Gln Gly Leu |     |     |
| 195   | 200 | 205 |
| Arg Ala Gly Ser Phe Phe Tyr Pro Gly Gly Asn Val Thr Tyr Gln Gly |     |     |
| 210   | 215 | 220 |
| Val Ala Val Thr Arg Ser Arg Lys Glu Gly Ile Ala His Asn Tyr Lys |     |     |
| 225   | 230 | 235 |
| Asn Glu Thr Glu Trp Arg Ala Asn Ile Asp Thr Val Met Ala Trp Phe |     |     |
| 245   | 250 | 255 |
| Thr Glu Glu Asp Leu Asp Leu Val Thr Leu Tyr Phe Gly Glu Pro Asp |     |     |
| 260   | 265 | 270 |
| Ser Thr Gly His Arg Tyr Gly Pro Glu Ser Pro Glu Arg Arg Glu Met |     |     |
| 275   | 280 | 285 |
| Val Arg Gln Val Asp Arg Thr Val Gly Tyr Leu Arg Glu Ser Ile Ala |     |     |
| 290   | 295 | 300 |
| Arg Asn His Leu Thr Asp Arg Leu Asn Leu Ile Ile Thr Ser Asp His |     |     |
| 305   | 310 | 315 |
| Gly Met Thr Thr Val Asp Lys Arg Ala Gly Asp Leu Val Glu Phe His |     |     |
| 325   | 330 | 335 |
| Lys Phe Pro Asn Phe Thr Phe Arg Asp Ile Glu Phe Glu Leu Leu Asp |     |     |
| 340   | 345 | 350 |
| Tyr Gly Pro Asn Gly Met Leu Leu Pro Lys Glu Gly Arg Leu Glu Lys |     |     |
| 355   | 360 | 365 |
| Val Tyr Asp Ala Leu Lys Asp Ala His Pro Lys Leu His Val Tyr Lys |     |     |
| 370   | 375 | 380 |
| Lys Glu Ala Phe Pro Glu Ala Phe His Tyr Ala Asn Asn Pro Arg Val |     |     |
| 385   | 390 | 395 |
| Thr Pro Leu Leu Met Tyr Ser Asp Leu Gly Tyr Val Ile His Gly Arg |     |     |
|   |     | 400 |

405                      410                      415  
 Ile Asn Val Gln Phe Asn Asn Gly Glu His Gly Phe Asp Asn Lys Asp  
 420                      425                      430  
 Met Asp Met Lys Thr Ile Phe Arg Ala Val Gly Pro Ser Phe Arg Ala  
 435                      440                      445  
 Gly Leu Glu Val Glu Pro Phe Glu Ser Val His Val Asn Glu Leu Met  
 450                      455                      460  
 Cys Arg Leu Leu Gly Ile Val Pro Glu Ala Asn Asp Gly His Leu Ala  
 465                      470                      475                      480  
 Thr Leu Leu Pro Met Leu His Thr Glu Ser Ala Leu Pro Pro Asp Gly  
 485                      490                      495  
 Arg Pro Thr Leu Leu Pro Lys Gly Arg Ser Ala Leu Pro Pro Ser Ser  
 500                      505                      510  
 Arg Pro Leu Leu Val Met Gly Leu Leu Gly Thr Val Ile Leu Leu Ser  
 515                      520                      525  
 Glu Val Ala  
 530

<210> 4139

<211> 270

<212> PRT

<213> Homo sapiens

<400> 4139

Met Thr Thr Leu Ser Asn Arg Asn Lys Tyr Leu Ser Cys Leu Val Trp  
 1                      5                      10                      15  
 Leu Thr Met Asp Arg Thr Phe Ser Ser Pro Ser Ile Phe Gly Leu Pro  
 20                      25                      30  
 Asn Ser Ser Ser Phe Thr Cys Trp Glu Gly Glu Gly Pro Ser Ala Gly  
 35                      40                      45  
 Ala Gly Ala Ala Pro Val Leu Leu Thr Ala Arg Ala Gly Gln Thr Val  
 50                      55                      60  
 Val His Pro Arg Glu Leu Pro Thr Gly Ser Arg Gly Gly Thr Lys Gly  
 65                      70                      75                      80  
 Asn Ser Pro Cys Gly Ser Gln Leu Val Leu Arg Met Asp Glu Gly Gly

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 85  |     | 90  |     | 95  |
| Cys Arg Arg Pro Gly Arg Asp Trp Ala Trp Gln Leu Leu Ser Leu Ser |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |
| Trp Pro Ala Leu Pro Arg Gly Ser Leu Gln Leu Trp Gly Gln Arg Ala |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |
| Ile Asp Gly Ala Gly Cys Val His Arg Gly Arg Arg Cys Val Glu Pro |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |
| Gln Ala Gly Pro Gly Arg Lys Ser Gln Lys Pro Lys Pro His Val Gln |     |     |     |     |     |
| 145   |     | 150 |     | 155 | 160 |
| Glu Arg Thr Asn Ser Ala Tyr Leu Leu Gln Gly Gly Trp Gly Arg Gly |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |
| Pro Ala Lys Gly Glu Ala Ser Thr Gln Thr Pro Val Trp Phe Ala Glu |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Val His Phe Arg Cys Leu Ser Gly Phe Val Ser Val Thr Leu Leu Ile |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |
| Gln Arg Glu Leu Leu Leu Thr Cys Ser Leu Arg Gly Phe Gln Ser Val |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |
| His Thr Asp Arg Lys Arg Trp Arg Lys Met Leu Gln Asp Thr Asn Arg |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Ala Leu Pro Gly Arg Cys Ser Arg His Arg Leu Ser Val Ser Phe Gln |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Gly Leu Ser Pro Arg Gly Cys Lys Asp Ser Phe Gly Val Thr         |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |

&lt;210&gt; 4140

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4140

|   |    |    |    |
|---|----|----|----|
| Met Gly Glu Pro Gly Gln Ser Pro Ser Pro Arg Ser Ser His Gly Ser |    |    |    |
| 1   | 5  | 10 | 15 |
| Pro Pro Thr Leu Ser Thr Leu Thr Leu Leu Leu Leu Cys Gly His     |    |    |    |
|   | 20 | 25 | 30 |
| Ala His Ser Gln Cys Lys Ile Leu Arg Cys Asn Ala Glu Tyr Val Ser |    |    |    |

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Ser Thr Leu Ser Leu Arg Gly Gly Gly Ser Ser Gly Ala Leu Arg Gly |     |     |
| 50  | 55  | 60  |
| Gly Gly Gly Gly Gly Arg Gly Gly Gly Val Gly Ser Gly Gly Leu Cys |     |     |
| 65  | 70  | 75  |
| Arg Ala Leu Arg Ser Tyr Ala Leu Cys Thr Arg Arg Thr Ala Arg Thr |     |     |
| 85  | 90  | 95  |
| Cys Arg Gly Asp Leu Ala Phe His Ser Ala Val His Gly Ile Glu Asp |     |     |
| 100   | 105 | 110 |
| Leu Met Ile Gln His Asn Cys Ser Arg Gln Gly Pro Thr Ala Pro Pro |     |     |
| 115   | 120 | 125 |
| Pro Pro Arg Gly Pro Ala Leu Pro Gly Ala Gly Ser Gly Leu Pro Ala |     |     |
| 130   | 135 | 140 |
| Pro Asp Pro Cys Asp Tyr Glu Gly Arg Phe Ser Arg Leu His Gly Arg |     |     |
| 145   | 150 | 155 |
| Pro Pro Gly Phe Leu His Cys Ala Ser Phe Gly Asp Pro His Val Arg |     |     |
| 165   | 170 | 175 |
| Ser Phe His His His Phe His Thr Cys Arg Val Gln Gly Ala Trp Pro |     |     |
| 180   | 185 | 190 |
| Leu Leu Asp Asn Asp Phe Leu Phe Val Gln Ala Thr Ser Ser Pro Met |     |     |
| 195   | 200 | 205 |
| Ala Leu Gly Ala Asn Ala Thr Ala Thr Arg Lys Leu Thr Ile Ile Phe |     |     |
| 210   | 215 | 220 |
| Lys Asn Met Gln Glu Cys Ile Asp Gln Lys Val Tyr Gln Ala Glu Val |     |     |
| 225   | 230 | 235 |
| Asp Asn Leu Pro Val Ala Phe Glu Asp Gly Ser Ile Asn Gly Gly Asp |     |     |
| 245   | 250 | 255 |
| Arg Pro Gly Gly Ser Ser Leu Ser Ile Gln Thr Ala Asn Pro Gly Asn |     |     |
| 260   | 265 | 270 |
| His Val Glu Ile Gln Ala Ala Tyr Ile Gly Thr Thr Ile Ile Ile Arg |     |     |
| 275   | 280 | 285 |
| Gln Thr Ala Gly Gln Leu Ser Phe Ser Ile Lys Val Ala Glu Asp Val |     |     |
| 290   | 295 | 300 |
| Ala Met Ala Phe Ser Ala Glu Gln Asp Leu Gln Leu Cys Val Gly Gly |     |     |
| 305   | 310 | 315 |
|   |     | 320 |

Cys Pro Pro Ser Gln Arg Leu Ser Arg Ser Glu Arg Asn Arg Arg Gly  
                     325                    330                    335  
 Ala Ile Thr Ile Asp Thr Ala Arg Arg Leu Cys Lys Glu Gly Leu Pro  
                     340                    345                    350  
 Val Glu Asp Ala Tyr Phe His Ser Cys Val Phe Asp Val Leu Ile Ser  
                     355                    360                    365  
 Gly Asp Pro Asn Phe Thr Val Ala Ala Gln Ala Ala Leu Glu Asp Ala  
                     370                    375                    380  
 Arg Ala Phe Leu Pro Asp Leu Glu Lys Leu His Leu Phe Pro Ser Asp  
 385                    390                    395                    400  
 Ala Gly Val Pro Leu Ser Ser Ala Thr Leu Leu Ala Pro Leu Leu Ser  
                     405                    410                    415  
 Gly Leu Phe Val Leu Trp Leu Cys Ile Gln  
                     420                    425

<210> 4141

<211> 128

<212> PRT

<213> Homo sapiens

<400> 4141

Met Tyr Cys Gln Asp Ser Asn Ile Cys Ala Val Phe Ala Val Gln Gly  
   1                    5                    10                    15  
 Gly Lys Val Gly Arg Lys His Gly Ile Lys Arg Gly Arg Arg Pro Ser  
                     20                    25                    30  
 Ile Arg Ser Pro Ala Gln Arg Ala Arg Gly Pro Trp Ile His Glu Ser  
                     35                    40                    45  
 Lys His Pro Ala Phe Ala Lys Gln Gln Ile Asn Leu Glu Met Pro Asn  
                     50                    55                    60  
 Ser Arg Ala Thr Thr Glu Leu Ala Trp Val Cys Ser Ser Thr Ser Arg  
 65                    70                    75                    80  
 Lys Lys Lys Trp Ala Gly Ser Leu Thr Leu Ser Thr Ala Pro Leu Ser  
                     85                    90                    95  
 Pro Pro Pro Ser Leu Val His Cys Glu Asp Cys Ser Cys Leu Pro Gly  
                     100                    105                    110

Cys His Ser Gly Asp Leu Tyr Asn Leu Ala Pro Ala Glu Arg Thr Cys  
 115 120 125

<210> 4142

<211> 386

<212> PRT

<213> Homo sapiens

<400> 4142

Met Asn Gly Thr Ile Tyr Ser Pro Gly Tyr Pro Asp Glu Tyr Pro Asn  
 1 5 10 15  
 Phe Gln Asp Cys Phe Trp Leu Val Arg Val Pro Pro Gly Asn Gly Ile  
 20 25 30  
 Tyr Ile Asn Phe Thr Val Leu Gln Thr Glu Pro Ile Tyr Asp Phe Ile  
 35 40 45  
 Thr Val Trp Asp Gly Pro Asp Gln Asn Ser Pro Gln Ile Gly Gln Phe  
 50 55 60  
 Ser Gly Asn Thr Ala Leu Glu Ser Val Tyr Ser Thr Ser Asn Gln Ile  
 65 70 75 80  
 Leu Ile Lys Phe His Ser Asp Phe Thr Thr Ser Gly Phe Phe Val Leu  
 85 90 95  
 Ser Tyr His Ala Tyr Gln Leu Arg Val Cys Gln Pro Pro Pro Pro Val  
 100 105 110  
 Pro Asn Ala Glu Ile Leu Thr Glu Asp Asp Glu Phe Glu Ile Gly Asp  
 115 120 125  
 Ile Ile Arg Tyr Gln Cys Leu Pro Gly Phe Thr Leu Val Gly Asn Ala  
 130 135 140  
 Ile Leu Thr Cys Arg Leu Gly Glu Arg Leu Gln Met Asp Gly Ala Pro  
 145 150 155 160  
 Pro Val Cys Gln Val Leu Cys Pro Ala Asn Glu Leu Arg Leu Asp Ser  
 165 170 175  
 Thr Gly Val Ile Leu Ser Pro Gly Tyr Pro Asp Ser Tyr Pro Asn Leu  
 180 185 190  
 Gln Met Cys Ala Trp Ser Ile Ser Val Glu Lys Gly Tyr Asn Ile Thr  
 195 200 205



Met Phe Val Glu Phe Phe Gln Thr Glu Lys Glu Phe Asp Val Leu Gln  
 210 215 220  
 Val Tyr Asp Gly Pro Asn Ile Gln Ser Pro Val Leu Ile Ser Leu Ser  
 225 230 235 240  
 Gly Asp Tyr Ser Ser Ala Phe Asn Ile Thr Ser Asn Gly His Glu Val  
 245 250 255  
 Phe Leu Gln Trp Ser Ala Asp His Gly Asn Asn Lys Lys Gly Phe Arg  
 260 265 270  
 Ile Arg Tyr Ile Ala Phe Tyr Cys Ser Thr Pro Glu Ser Pro Pro His  
 275 280 285  
 Gly Tyr Ile Ile Ser Gln Thr Gly Gly Gln Leu Asn Ser Val Val Arg  
 290 295 300  
 Trp Ala Cys Asp Arg Gly Phe Arg Leu Val Gly Lys Ser Ser Ala Val  
 305 310 315 320  
 Cys Arg Lys Ser Ser Tyr Gly Tyr His Ala Trp Asp Ala Pro Val Pro  
 325 330 335  
 Ala Cys Gln Gly Glu Val Tyr Tyr Ala Lys Met Asn Lys Asn Met Asn  
 340 345 350  
 Val Arg Leu Ala Pro Phe Asn Val Phe Ile Trp Ile Thr Asn Phe Ser  
 355 360 365  
 Glu Asn Gly Asn Ile Arg Lys His Ile Val Asn Ser Phe His Lys Asn  
 370 375 380  
 Lys Ala  
 385

<210> 4143

<211> 164

<212> PRT

<213> Homo sapiens

<400> 4143

Met Leu Val Glu Val Ala Leu Cys Thr Trp Tyr Leu Val Ala Phe Pro  
 1 5 10 15  
 Pro Glu Val Val Thr Asp Trp His Met Leu Pro Thr Glu Ala Leu Val  
 20 25 30



Glu Ile Asn Val Ala Lys Lys Thr Ile Glu Ser Ser Ser Asn Asp Leu  
                     85                    90                    95  
 Gly Pro Phe Tyr Ser Leu Pro Ser Lys Val Arg Asp Leu Tyr Ala Gln  
                     100                    105                    110  
 Phe Lys Gly Ile Glu Lys Leu Tyr Gly Asn Ala Phe Cys Trp Asn Lys  
                     115                    120                    125  
 Lys Ile Phe Phe Leu Ser Leu Pro  
                     130                    135

<210> 4145

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4145

Met Phe Val Leu Glu Phe Val Glu Pro Trp His Val Asp His Ser Ser  
   1                    5                    10                    15  
 Leu Gly Ser Ala Asp Ser Gly Leu Gln Ser Leu Ala Ala Val Thr Ala  
                     20                    25                    30  
 Ala Lys Ala Arg Leu Tyr Ser Arg Arg Ser Leu Leu Ser Leu Ser Trp  
                     35                    40                    45  
 Thr Leu Pro Leu Ser Ser Arg Val Trp Ala Gly Arg Lys Glu Pro Leu  
                     50                    55                    60  
 Arg Lys Leu Asp Ser Leu Trp Thr Leu Pro Leu Glu Ile Ala Val Val  
   65                    70                    75                    80  
 Arg Val Leu Ser Gly Trp Phe Leu Ser Leu Ser Arg Tyr Gln Ala Leu  
                     85                    90                    95  
 His Trp Leu His Arg Pro Ile Gln Ser Val Val Gln Arg Ile Lys Pro  
                     100                    105                    110  
 Ser Lys Thr Thr Gln Val  
                     115

<210> 4146

<211> 404

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4146

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Met Ile Thr Glu Ala Leu Ala Gln Gly Gly Met His Ile Arg Ala Arg
  1              5              10              15
Phe Pro Pro Thr Thr Ala Val Ser Ala Ile Pro Ser Ser Ser Ile Pro
      20              25              30
Leu Gly Arg Gln Pro Met Ala Gln Val Ser Gln Ser Ser Leu Pro Met
      35              40              45
Leu Ser Ser Pro Ser Pro Gly Gln Gln Val Gln Thr Pro Gln Ser Met
      50              55              60
Pro Pro Pro Pro Gln Pro Ser Pro Gln Pro Gly Gln Pro Ser Ser Gln
      65              70              75              80
Pro Asn Ser Asn Val Ser Ser Gly Pro Ala Pro Ser Pro Ser Ser Phe
      85              90              95
Leu Pro Ser Pro Ser Pro Gln Pro Ser Gln Ser Pro Val Thr Ala Arg
      100             105             110
Thr Pro Gln Asn Phe Ser Val Pro Ser Pro Gly Pro Leu Asn Thr Pro
      115             120             125
Val Asn Pro Ser Ser Val Met Ser Pro Ala Gly Ser Ser Gln Ala Glu
      130             135             140
Glu Gln Gln Tyr Leu Asp Lys Leu Lys Gln Leu Ser Lys Tyr Ile Glu
      145             150             155             160
Pro Leu Arg Arg Met Ile Asn Lys Ile Asp Lys Asn Glu Asp Arg Lys
      165             170             175
Lys Asp Leu Ser Lys Met Lys Ser Leu Leu Asp Ile Leu Thr Asp Pro
      180             185             190
Ser Lys Arg Cys Pro Leu Lys Thr Leu Gln Lys Cys Glu Ile Ala Leu
      195             200             205
Glu Lys Leu Lys Asn Asp Met Ala Val Pro Thr Pro Pro Pro Pro
      210             215             220
Val Pro Pro Thr Lys Gln Gln Tyr Leu Cys Gln Pro Leu Leu Asp Ala
      225             230             235             240
Val Leu Ala Asn Ile Arg Ser Pro Val Phe Asn His Ser Leu Tyr Arg
      245             250             255

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Thr Phe Val Pro Ala Met Thr Ala Ile His Gly Pro Pro Ile Thr Ala  
 260 265 270  
 Pro Val Val Cys Thr Arg Lys Arg Arg Leu Glu Asp Asp Glu Arg Gln  
 275 280 285  
 Ser Ile Pro Ser Val Leu Gln Gly Glu Val Ala Arg Leu Asp Pro Lys  
 290 295 300  
 Phe Leu Val Asn Leu Asp Pro Ser His Cys Ser Asn Asn Gly Thr Val  
 305 310 315 320  
 His Leu Ile Cys Lys Leu Asp Asp Lys Asp Leu Pro Ser Val Pro Pro  
 325 330 335  
 Leu Glu Leu Ser Val Pro Ala Asp Tyr Pro Ala Gln Ser Pro Leu Trp  
 340 345 350  
 Ile Asp Arg Gln Trp Gln Tyr Asp Ala Asn Pro Phe Leu Gln Ser Val  
 355 360 365  
 His Arg Cys Met Thr Ser Arg Leu Leu Gln Leu Pro Asp Lys His Ser  
 370 375 380  
 Val Thr Ala Leu Leu Asn Thr Trp Ala Gln Ser Val His Gln Ala Cys  
 385 390 395 400  
 Leu Thr Ala Ala

<210> 4147

<211> 114

<212> PRT

<213> Homo sapiens

<400> 4147

Met Arg Glu Ile Cys Ile Lys Asn Thr Lys Arg Leu Lys Thr Gly Thr  
 1 5 10 15  
 Glu Cys Ser Arg Thr Gly Ser Gln Gly Leu Arg Asp Pro Gly Pro Ser  
 20 25 30  
 Ser Ala Arg Pro Trp Trp Gly Arg Ala Val Gly Arg Arg Glu Ala Gly  
 35 40 45  
 Phe Pro Arg Val His Ala Arg Cys Pro Ser Ala Leu Ala Ser Leu Pro  
 50 55 60

Pro Cys Val Ala Cys Ser Pro Phe Ser Leu Pro Asp Pro Gly Cys Phe  
 65                      70                      75                      80  
 Asp Asn Leu Gln Ala Leu Arg Val Asn Ala Leu Leu Leu Ser Phe Ile  
                     85                      90                      95  
 Pro Gln Arg Cys Thr Val Leu Gly Thr Gly Arg Ser Trp Ala Cys Lys  
                     100                      105                      110  
 Glu Glu

<210> 4148

<211> 112

<212> PRT

<213> Homo sapiens

<400> 4148

Met Gln Tyr Tyr Gly Pro Ala Thr Trp Ala Asp Gly Ser Trp Arg Tyr  
 1                      5                      10                      15  
 Arg Thr Pro Ile Tyr Met Leu Asn His Ile Ile Trp Leu Gln Ala Val  
                     20                      25                      30  
 Leu Glu Ile Ile Thr Asn Asp Thr Ala Arg Ala Leu Asn Leu Leu Ala  
                     35                      40                      45  
 Arg Lys Ser Thr Glu Met Arg Asn Ala Val Tyr Gln Asn Arg Leu Ala  
                     50                      55                      60  
 Leu Asp Tyr Leu Leu Ala Gln Glu Gly Gly Val Cys Arg Lys Phe Ser  
 65                      70                      75                      80  
 Leu Thr Asn Cys Cys Leu Lys Ile Asp Asp Asn Gly Lys Val Val Lys  
                     85                      90                      95  
 Gln Lys Ala Ala Arg Ile Gln Lys Leu Ala His Ile Pro Val Lys Thr  
                     100                      105                      110

<210> 4149

<211> 116

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4149

Met Asp Lys Phe Pro Asn Ala Tyr Thr Leu Pro Arg Leu Asn Gln Glu  
 1 5 10 15  
 Glu Ile Glu Ser Leu Asn Arg Pro Thr Met Ser Ser Glu Val Glu Ala  
 20 25 30  
 Val Ile Asn Ser Ile Pro Thr Lys Lys Gly Pro Gly Pro Asp Gly Phe  
 35 40 45  
 Thr Asp Glu Phe Tyr Gln Met Tyr Lys Glu Glu Leu Val Pro Phe Ile  
 50 55 60  
 Gln Ile Glu Thr Ile Pro Lys Ile Glu Ala Glu Gly Leu Leu Leu Asn  
 65 70 75 80  
 Ser Phe Cys Glu Val Ser Ile Ile Leu Ile Pro Lys Pro Gly Arg His  
 85 90 95  
 Thr Lys Gln Asn Lys Thr Lys Gln Asn Lys Thr Lys Lys Lys Thr Ser  
 100 105 110  
 Asp Gln Tyr Pro  
 115

&lt;210&gt; 4150

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4150

Met Asp Gly Arg Gly Ala Phe Trp Thr Val Ala Ile Pro Arg Ala Arg  
 1 5 10 15  
 Gln Glu Gly Leu Gly Arg Leu Gly Leu Pro Phe Pro Val Lys Arg Thr  
 20 25 30  
 Pro Pro Ala Pro Gln Asn Pro Gly Gly Ser Thr Gln Ala Pro Gln Arg  
 35 40 45  
 Val Val Gly Lys Ser His Ser Gly Ile Arg Met Pro Ala Lys Ser Arg  
 50 55 60  
 Asn Leu Arg Leu Glu Ser Lys Leu Asn Arg Lys Val Val Lys Tyr Lys

|   |     |     |     |
|---|-----|-----|-----|
| 65  | 70  | 75  | 80  |
| Trp Gly Lys Gln Gly Ser Gly Ala Gly Arg Glu Leu Val Pro Ala Phe |     |     |     |
|   | 85  | 90  | 95  |
| Pro Thr Asn Ala Gly Leu Gly Arg Arg Asp Arg Cys Arg Pro Pro Pro |     |     |     |
|   | 100 | 105 | 110 |
| Ala Gly Gly Asp Val Ala Ser His Gly Leu Pro Gly Ser Gly Val Gly |     |     |     |
|   | 115 | 120 | 125 |
| Tyr Ser Cys Asn Gln Arg Glu Glu Gly Leu Arg Gly Gly Cys Gly Gly |     |     |     |
|   | 130 | 135 | 140 |
| Ile Pro His Val Pro Leu Phe Leu Ser Pro Leu Pro Leu Asp Ala Ser |     |     |     |
| 145   | 150 | 155 | 160 |
| Gly Gln Arg Pro Ser Ser Thr Tyr Arg Gln Ser Leu Arg Arg Gly Leu |     |     |     |
|   | 165 | 170 | 175 |
| Gly Thr Arg Ala His Gln Ser Pro Ala Asn Glu Ile Pro Glu Leu Gly |     |     |     |
|   | 180 | 185 | 190 |
| Asp Leu Arg Gly Ser Arg Leu Ala Gln Glu Pro Ala Val Leu Phe Gly |     |     |     |
|   | 195 | 200 | 205 |
| Leu Arg Pro Ser Ile Ser Lys Arg Gly Leu Leu Ala Arg Arg Leu Trp |     |     |     |
|   | 210 | 215 | 220 |
| Ala Gln Pro Met Leu Leu Ser Gly Trp Val Val Ser Thr Thr Thr Thr |     |     |     |
| 225   | 230 | 235 | 240 |
| Ile Ile Thr Val Thr Val Thr Phe Thr Pro Thr Gly Leu Leu Cys Val |     |     |     |
|   | 245 | 250 | 255 |
| Lys His Ser Arg Gly Pro Leu Gln Pro Thr Cys Gln Glu Ser Ala Pro |     |     |     |
|   | 260 | 265 | 270 |
| Glu Asn Arg Val Gly Lys Gly Gln Cys Pro Ser Glu Ser Ser Cys Arg |     |     |     |
|   | 275 | 280 | 285 |
| Gln Lys Ala Gly Glu Val Arg Ser Phe Val Tyr Leu Lys Gly Asn Lys |     |     |     |
|   | 290 | 295 | 300 |
| Leu Leu   |     |     |     |
| 305   |     |     |     |

&lt;210&gt; 4151

&lt;211&gt; 124

&lt;212&gt; PRT



<213> Homo sapiens

<400> 4151

```

Met Ala Pro Thr Ser Thr Trp Ala Pro Gly Leu Gly Thr Gly Phe Ser
 1             5             10             15
Leu Gly Ser Ser Ser Ser Leu Leu Pro Thr Thr Asp Pro His Gln Val
             20             25             30
Leu Ser Arg Ser Gly Pro Asn Gly Ser Leu Glu Phe Gly Pro Leu Val
             35             40             45

Ser Ser Pro Ala Ser Pro Phe Leu Val Gln Ala Gln Ile Ser Leu Thr
             50             55             60
Lys Ile Val Gln Leu Pro Ser Arg Asn Gly Glu Phe Ile Pro Leu Ile
             65             70             75             80
Leu Pro Pro Ser Phe Arg Leu Pro Thr Leu Phe Cys Ser Gln Ser Asp
             85             90             95
Leu Lys Val Phe Leu Trp Leu His Ser Cys Ala Leu Lys Leu Ser Val
             100            105            110
Ala Pro Gln Gly Pro Gln Arg Arg Gly Arg Gly Gly
             115            120

```

<210> 4152

<211> 131

<212> PRT

<213> Homo sapiens

<400> 4152

```

Met Lys Ala Thr Asn Phe Leu Leu His Ser Cys Leu Ala Ala Ile Tyr
 1             5             10             15
Leu Gly Gln Pro Ile Ser Leu Ala Pro Gln Arg His Thr Arg Leu Gln
             20             25             30
Tyr Pro Lys Arg Pro Tyr Gln Phe Leu Ser Glu Ala Arg Gln Ile Val
             35             40             45
Lys Asn Gln Ile Cys Ser Lys Val Leu Gly Pro Pro Leu Ser Ser Asp
             50             55             60

```

Arg Cys Arg Gln Val Phe Ser Leu Ala Gln Val Pro Val Ala Ser Leu  
 65 70 75 80  
 Pro Leu Glu Val Trp Pro Ala Ser Leu Ala Val Asn Pro Val Arg Gly  
 85 90 95  
 Pro His Leu Ser Leu Ser Ala Ala Ile Ser Phe Cys Thr Ala Ala Ile  
 100 105 110  
 Leu Leu Pro Ala Ser Ser Pro Pro Pro Ser Tyr Phe Leu Phe Ser Leu  
 115 120 125  
 Leu Pro Phe  
 130

<210> 4153

<211> 151

<212> PRT

<213> Homo sapiens

<400> 4153

Met Thr Lys Glu Tyr Gln Asp Leu Gln His Leu Asp Asn Glu Glu Ser  
 1 5 10 15  
 Asp His His Gln Leu Arg Lys Gly Glu Gly His Leu Ala Leu Pro Leu  
 20 25 30  
 Gln Gly Glu Asn Leu Ala Val Leu His Pro Pro Ala Thr Ala Pro Thr  
 35 40 45  
 Leu Ala Arg Glu Pro Gly Ser Leu Ser Gly Ser Val Ser Leu Pro Gln  
 50 55 60  
 His Trp Glu Arg Cys Arg Asn Cys Leu Ser Gln Glu Arg Gly Gly Val  
 65 70 75 80  
 Trp Gly Trp Ile Pro Phe Ile Gly Asp Arg Cys Pro Lys Leu Ser Cys  
 85 90 95  
 Ala Ser Trp Pro Ser Glu Val Asp Pro Gly Val Trp Glu Gln Leu Glu  
 100 105 110  
 Ala Gly Glu Met Arg Ser Leu Ser Ala Ser Tyr Asp Glu Val Thr Pro  
 115 120 125  
 Pro Leu Pro Phe Pro Phe Gln His His Pro Gly Thr Pro Val Val Arg  
 130 135 140

Ala Cys Ala Cys Val Cys Gln

145

150

<210> 4154

<211> 110

<212> PRT

<213> Homo sapiens

<400> 4154

Met Gly Gly Val Pro Glu Pro Phe Pro Ser Pro Leu Arg Arg Gln Gln

1

5

10

15

Arg Arg Val Gly Lys Trp Ser Gly Ser Ser Leu Gly Gly Leu Ala Gln

20

25

30

Val Leu Arg Asn Cys Asn Arg Lys Cys Arg Ser Trp Ser Glu Pro Met

35

40

45

Arg Arg Lys Pro His Leu Cys Ile Ala His Ala Ser Trp Arg Gly Asp

50

55

60

Ile Ile His Ser His Ala Ser His Leu Ser Pro Gln Gly Pro Arg Glu

65

70

75

80

Lys Pro Gln Thr Pro Phe Ser Cys Arg Val Trp Gly Trp Trp Cys Cys

85

90

95

Arg Gly Arg Ala Gly Trp Gly Ser Pro Asp Phe Phe Cys Pro

100

105

110

<210> 4155

<211> 589

<212> PRT

<213> Homo sapiens

<400> 4155

Met Ala Ala Glu Lys Gln Val Pro Gly Gly Gly Gly Gly Gly Ser

1

5

10

15

Gly Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Arg Gly

|   |     |     |
|---|-----|-----|
| 20  | 25  | 30  |
| Ala Gly Gly Glu Glu Asn Lys Glu Asn Glu Arg Pro Ser Ala Gly Ser |     |     |
| 35  | 40  | 45  |
| Lys Ala Asn Lys Glu Phe Gly Asp Ser Leu Ser Leu Glu Ile Leu Gln |     |     |
| 50  | 55  | 60  |
| Ile Ile Lys Glu Ser Gln Gln Gln His Gly Leu Arg His Gly Asp Phe |     |     |
| 65  | 70  | 75  |
| Gln Arg Tyr Arg Tyr Leu Leu Leu Val Leu Met Asp Ala Glu Arg Ala |     |     |
| 85  | 90  | 95  |
| Trp Ser Tyr Ala Met Gln Leu Lys Gln Glu Ala Asn Thr Glu Pro Arg |     |     |
| 100   | 105 | 110 |
| Lys Arg Phe His Leu Leu Ser Arg Leu Arg Lys Ala Val Lys His Ala |     |     |
| 115   | 120 | 125 |
| Glu Glu Leu Glu Arg Leu Cys Glu Ser Asn Arg Val Asp Ala Lys Thr |     |     |
| 130   | 135 | 140 |
| Lys Leu Glu Ala Gln Ala Tyr Thr Ala Tyr Leu Ser Gly Met Leu Arg |     |     |
| 145   | 150 | 155 |
| Phe Glu His Gln Glu Trp Lys Ala Ala Ile Glu Ala Phe Asn Lys Cys |     |     |
| 165   | 170 | 175 |
| Lys Thr Ile Tyr Glu Lys Leu Ala Ser Ala Phe Thr Glu Glu Gln Ala |     |     |
| 180   | 185 | 190 |
| Val Leu Tyr Asn Gln Arg Val Glu Glu Ile Ser Pro Asn Ile Arg Tyr |     |     |
| 195   | 200 | 205 |
| Cys Ala Tyr Asn Ile Gly Asp Gln Ser Ala Ile Asn Glu Leu Met Gln |     |     |
| 210   | 215 | 220 |
| Met Arg Leu Arg Ser Gly Gly Thr Glu Gly Leu Leu Ala Glu Lys Leu |     |     |
| 225   | 230 | 235 |
| Glu Ala Leu Ile Thr Gln Thr Arg Ala Lys Gln Ala Ala Thr Met Ser |     |     |
| 245   | 250 | 255 |
| Glu Val Glu Trp Arg Gly Arg Thr Val Pro Val Lys Ile Asp Lys Val |     |     |
| 260   | 265 | 270 |
| Arg Ile Phe Leu Leu Gly Leu Ala Asp Asn Glu Ala Ala Ile Val Gln |     |     |
| 275   | 280 | 285 |
| Ala Glu Ser Glu Glu Thr Lys Glu Arg Leu Phe Glu Ser Met Leu Ser |     |     |
| 290   | 295 | 300 |
| Glu Cys Arg Asp Ala Ile Gln Val Val Arg Glu Glu Leu Lys Pro Asp |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 305   | 310 | 315 | 320 |
| Gln Lys Gln Arg Asp Tyr Ile Leu Glu Gly Glu Pro Gly Lys Val Ser |     |     |     |
| 325   | 330 | 335 |     |
| Asn Leu Gln Tyr Leu His Ser Tyr Leu Thr Tyr Ile Lys Leu Ser Thr |     |     |     |
| 340   | 345 | 350 |     |
| Ala Ile Lys Arg Asn Glu Asn Met Ala Lys Gly Leu Gln Arg Ala Leu |     |     |     |
| 355   | 360 | 365 |     |
| Leu Gln Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln |     |     |     |
| 370   | 375 | 380 |     |
| Asp Leu Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu |     |     |     |
| 385   | 390 | 395 | 400 |
| Leu Gln Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile |     |     |     |
| 405   | 410 | 415 |     |
| Gly Leu Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala |     |     |     |
| 420   | 425 | 430 |     |
| Gln Ser Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr |     |     |     |
| 435   | 440 | 445 |     |
| Asp Arg Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala |     |     |     |
| 450   | 455 | 460 |     |
| Phe Lys Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr |     |     |     |
| 465   | 470 | 475 | 480 |
| Gln Val Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp |     |     |     |
| 485   | 490 | 495 |     |
| Ala Asn Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp |     |     |     |
| 500   | 505 | 510 |     |
| Asn Lys Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser |     |     |     |
| 515   | 520 | 525 |     |
| Leu Val Thr Lys Gln Ala Asn Leu Val His Phe Pro Pro Gly Phe Gln |     |     |     |
| 530   | 535 | 540 |     |
| Pro Ile Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val |     |     |     |
| 545   | 550 | 555 | 560 |
| Ala Phe Pro Pro Leu Glu Asp Glu Leu Glu Gln Lys Thr Lys Ser Gly |     |     |     |
| 565   | 570 | 575 |     |
| Leu Thr Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser             |     |     |     |
| 580   | 585 |     |     |

&lt;210&gt; 4156

&lt;211&gt; 356

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4156

```

Met Phe Ser Ser Tyr Pro Leu Pro Asn Cys Tyr Leu Ser Asp Ile Thr
  1             5             10             15
Arg Asn Ala Gly Ile Lys Gln Asp Asn Asp Leu Asp Lys Leu Leu Leu
      20             25             30
Cys Leu Lys Ile Ser Asp Lys Gln Thr Glu Trp Ile Glu Asn Cys Gln
      35             40             45
Arg Gln Phe Cys Lys Met Met Lys Ala Lys Pro Asp Ile Ile Ser Gly
      50             55             60

Glu Ala Leu Ile Glu Leu Leu Glu Lys Phe Val Leu His Leu Thr Glu
  65             70             75             80
Ser Pro Ser Glu Cys Tyr Phe Pro Ser Val Glu Tyr Thr Ala Thr Asp
      85             90             95
Ala Asn Val Lys Asn Glu Ser Leu Ser Ser Val Gln Gln Leu Gly Ile
      100            105            110
Lys Met Thr Val Arg Tyr Gly Lys Phe Leu Ser Leu Leu Lys Asp Gly
      115            120            125
Ala Glu Asn Asp Leu Thr Trp Val Leu Lys His Cys Glu Arg Phe Leu
      130            135            140
Lys Gln Gln Gln Thr Ser Ile Lys Ser Ser Leu Leu Cys Leu Gln Gly
      145            150            155            160
Asn Tyr Ala Gly His Asp Trp Phe Val Ser Ser Leu Phe Met Ile Met
      165            170            175
Leu Gly Asp Lys Glu Lys Thr Phe Gln Phe Leu His Gln Phe Ser Arg
      180            185            190
Leu Leu Thr Ser Ala Phe Leu Trp Ser Pro Arg Leu His Ile Ser Ser
      195            200            205
Tyr Leu Pro Asn Asp Thr Val Glu Ser Gly Ile His Pro Val Tyr Phe
      210            215            220

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Cys Ser Thr His Tyr Ile Glu Met Leu Leu Lys Ala Glu Leu Pro Leu  
 225                      230                      235                      240  
 Val Phe Ser Ala Phe His Met Ser Gly Phe Ala Pro Ser Gln Ile Cys  
                          245                      250                      255  
 Leu Gln Trp Ile Thr Gln Cys Phe Trp Asn Tyr Leu Asp Trp Ile Glu  
                          260                      265                      270  
 Ile Cys His Tyr Ile Ala Thr Cys Val Phe Leu Gly Pro Asp Tyr Gln  
                          275                      280                      285  
 Val Tyr Ile Cys Ile Ala Val Phe Lys His Leu Gln Gln Asp Ile Leu  
                          290                      295                      300  
 Gln His Thr Gln Thr Gln Asp Leu Gln Val Phe Leu Lys Glu Glu Ala  
 305                      310                      315                      320  
 Leu His Gly Phe Arg Val Ser Asp Tyr Phe Glu Tyr Met Glu Ile Leu  
                          325                      330                      335  
 Glu Gln Asn Tyr Arg Thr Val Leu Leu Arg Asp Met Arg Asn Ile Arg  
                          340                      345                      350  
 Leu Gln Ser Thr  
                          355

<210> 4157

<211> 137

<212> PRT

<213> Homo sapiens

<400> 4157

Met Ser Asn Cys Phe Leu Lys Val Cys Pro Ala Val Ser Ser Tyr Ser  
   1                      5                      10                      15  
 Pro Leu Ser Val Gln Val Leu Phe Tyr Phe Pro Ile Ala Pro Cys Pro  
                          20                      25                      30  
 His Arg Val Gly Val Gly Glu Val Gln Cys Ala Cys Val His Ile His  
                          35                      40                      45  
 Ile Phe Arg Cys Tyr Gln Leu Gly Ser Gln Leu Ile Cys Ala Ser Phe  
                          50                      55                      60  
 Leu Gly Thr Val Leu His Pro Phe Pro Pro Val Gly Ser Ala Phe Glu  
   65                      70                      75                      80

Ile Gln Thr Ser Ile Leu Asn Tyr Thr Ile Leu Thr Asn Ser Leu Thr  
                     85                    90                    95  
 Pro Met Arg Leu Tyr Leu Pro His Val Arg Val Ser Gly Ser Leu Cys  
                     100                    105                    110  
 Glu Phe Val Tyr Arg Tyr Leu Lys Ser Asn Gln Leu Ser His Tyr Ser  
                     115                    120                    125  
 His Gln Ser Ser Pro Arg His His Phe  
                     130                    135

<210> 4158

<211> 110

<212> PRT

<213> Homo sapiens

<400> 4158

Met Asn His Leu Pro Pro Asn His Tyr Arg Ser His Val Phe Thr Cys  
     1                    5                    10                    15  
 His Val Asp Gln Tyr Leu Thr Val Glu Thr Ala Gly Gly Met Glu Lys  
                     20                    25                    30  
 Glu Ala Val Ser Val Thr Val Leu Leu Ser Ala Ala Pro Cys Leu Leu  
                     35                    40                    45  
 Ser Cys Phe Leu Gly Ser Ser Val Ser Gly Leu Ala Phe Trp Val Ser  
                     50                    55                    60  
 Gln Gln Lys Thr Lys Gly Pro Glu Arg Cys Lys Asn Thr His His Leu  
     65                    70                    75                    80  
 Ala Gly Asn Asn Phe Pro Ala Cys Tyr Leu Phe Arg Asp Pro Glu His  
                     85                    90                    95  
 Thr Ala Phe Pro Arg Arg Leu Leu Pro Pro Ala Thr Glu Glu  
                     100                    105                    110

<210> 4159

<211> 192

<212> PRT

<213> Homo sapiens



&lt;400&gt; 4159

Met Ala Cys Gly Ala Thr Leu Lys Arg Pro Met Glu Phe Glu Ala Ala  
 1 5 10 15  
 Leu Leu Ser Pro Gly Ser Pro Lys Arg Arg Arg Cys Ala Pro Leu Pro  
 20 25 30  
 Gly Pro Thr Pro Gly Leu Arg Pro Pro Asp Ala Glu Pro Pro Pro Pro  
 35 40 45  
 Phe Gln Thr Gln Thr Pro Pro Gln Ser Leu Gln Gln Pro Ala Pro Pro  
 50 55 60  
 Gly Ser Glu Arg Arg Leu Pro Thr Pro Glu Gln Ile Phe Gln Asn Ile  
 65 70 75 80  
 Lys Gln Glu Tyr Ser Arg Tyr Gln Arg Trp Arg His Leu Glu Val Val  
 85 90 95  
 Leu Asn Gln Ser Glu Ala Cys Ala Ser Glu Ser Gln Pro His Ser Ser  
 100 105 110  
 Ala Leu Thr Ala Pro Ser Ser Pro Gly Ser Ser Trp Met Lys Lys Asp  
 115 120 125  
 Gln Pro Thr Phe Thr Leu Arg Gln Val Gly Ile Ile Cys Glu Arg Leu  
 130 135 140  
 Leu Lys Asp Tyr Glu Asp Lys Ile Arg Glu Glu Tyr Glu Gln Ile Leu  
 145 150 155 160  
 Asn Thr Lys Leu Ala Glu Gln Tyr Glu Ser Phe Val Lys Phe Thr His  
 165 170 175  
 Asp Gln Ile Met Arg Arg Tyr Gly Thr Arg Pro Thr Ser Tyr Val Ser  
 180 185 190

&lt;210&gt; 4160

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4160

Met Thr Ala Met Glu Met Ser Thr Glu Leu Ser Met Phe Phe Trp Lys  
 1 5 10 15

Glu Thr Gln Thr Arg Ile Pro Gly Arg Trp Ser Gly Arg Arg Arg Glu  
                   20                                  25                                  30  
 Ser Gln Ala Arg Arg Met Val Ala Arg Arg Gly Arg Gly Ala Ser Arg  
                   35                                  40                                  45  
 Gly Arg Glu Phe Arg Gly Gln Glu Asn Gly Leu Asp Gly Thr Lys Ser  
                   50                                  55                                  60  
 Gly Gly Pro Ser Gly Arg Gly Thr Glu Arg Gly Arg Arg Gly Arg Gly  
                   65                                  70                                  75                                  80  
 Arg Gly Arg Gly Gly Ser Gly Arg Arg Gly Gly Arg Phe Ser Ala Gln  
                                   85                                  90                                  95  
 Gly Met Gly Thr Phe Asn Pro Ala Asp Tyr Ala Glu Pro Ala Asn Thr  
                   100                                  105                                  110  
 Asp Asp Asn Tyr Gly Asn Ser Ser Val Ser Ser Ser Leu Asn Ser Gly  
                   115                                  120                                  125  
 Ser Ser Leu Gly Leu Ser Leu Gly Ser Asn Ser Thr Val Thr Ala Ser  
                   130                                  135                                  140  
 Thr Arg Ser Ser Val Ala Thr Thr Ser Gly Lys Ala Pro Pro Asn Leu  
                   145                                  150                                  155                                  160  
 Pro Pro Gly Val Pro Pro Leu Leu Pro Asn Pro Tyr Ile Met Ala Pro  
                                   165                                  170                                  175  
 Gly Leu Leu His Ala Tyr Pro Pro Gln Val Tyr Gly Tyr Asp Asp Leu  
                   180                                  185                                  190  
 Gln Met Leu Gln Thr Arg Phe Pro Leu Asp Tyr Tyr Ser Ile Pro Phe  
                   195                                  200                                  205  
 Pro Thr Pro Thr Thr Pro Leu Thr Gly Arg Asp Gly Ser Leu Ala Ser  
                   210                                  215                                  220  
 Asn Pro Tyr Ser Gly Asp Leu Thr Lys Phe Gly Arg Gly Asp Ala Ser  
                   225                                  230                                  235                                  240  
 Ser Pro Ala Pro Ala Thr Thr Leu Ala Gln Pro Gln Gln Asn Gln Thr  
                                   245                                  250                                  255  
 Gln Thr His His Thr Thr Gln Gln Thr Phe Leu Asn Pro Ala Leu Pro  
                   260                                  265                                  270  
 Pro Gly Tyr Ser Tyr Thr Ser Leu Pro Tyr Tyr Thr Gly Val Pro Gly  
                   275                                  280                                  285  
 Leu Pro Ser Thr Phe Gln Tyr Gly Pro Ala Val Phe Pro Val Ala Pro  
                   290                                  295                                  300

Thr Ser Ser Lys Gln His Gly Val Asn Val Ser Val Asn Ala Ser Ala  
 305                                    310                                    315                                    320

Thr Pro Phe Gln Gln Pro Ser Gly Tyr Gly Ser His Gly Tyr Asn Thr  
                                   325                                    330                                    335

Gly Arg Lys Tyr Pro Pro Pro Tyr Lys His Phe Trp Thr Ala Glu Ser  
                                   340                                    345                                    350

<210> 4161

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4161

Met Glu Ala Leu Leu Ser Val Gln Glu Ala Ser Arg Cys Pro Pro Gly  
   1                                    5                                    10                                    15

Phe Phe Pro Ser Ser Gly Trp Pro Arg Ser Gln Ala Trp Ser Thr Arg  
                                   20                                    25                                    30

Ser Gln Pro Val Gln Arg Pro Val Ala Cys Leu Pro Gly Pro Leu Pro  
                                   35                                    40                                    45

Gly Leu Ala Leu Pro Gly Asp Leu Ser Ile Ile Pro Glu Lys Trp Met  
                                   50                                    55                                    60

Glu Arg Val Met Ala Pro Leu Lys Arg Gln Thr Ser Arg Arg Leu Glu  
                                   65                                    70                                    75                                    80

Glu Ser Lys Gly Ser Cys Pro Gln Arg Pro Val Pro Ala Pro Thr Gln  
                                   85                                    90                                    95

Pro Leu Val Cys Pro Pro Ser Leu Leu Ser Ser Thr Leu Leu Cys Cys  
                                   100                                    105                                    110

Pro Leu Leu Leu Thr Arg  
                                   115

<210> 4162

<211> 279

<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4162

```

Met Met Leu Met Gln Ala Leu Val Leu Phe Thr Leu Asp Ser Leu Asp
 1              5              10              15
Met Leu Pro Ala Val Lys Ala Thr Trp Leu Tyr Gly Ile Gln Ile Thr
      20              25              30
Ser Leu Leu Leu Val Cys Ile Leu Gln Phe Phe Asn Ser Met Ile Leu
      35              40              45
Gly Ser Leu Leu Ile Ser Phe Asn Leu Ser Val Phe Ile Ala Arg Lys
      50              55              60
Leu Gln Lys Asn Leu Lys Thr Gly Ser Phe Leu Asn Arg Leu Gly Lys
      65              70              75              80
Leu Leu Leu His Leu Phe Met Val Leu Cys Leu Thr Leu Phe Leu Asn
              85              90              95
Asn Ile Ile Lys Lys Ile Leu Asn Leu Lys Ser Asp Glu His Ile Phe
      100              105              110
Lys Phe Leu Lys Ala Lys Phe Gly Leu Gly Ala Thr Arg Asp Phe Asp
      115              120              125
Ala Asn Leu Tyr Leu Cys Glu Glu Ala Phe Gly Leu Leu Pro Phe Asn
      130              135              140
Thr Phe Gly Arg Leu Ser Asp Thr Leu Leu Phe Tyr Ala Tyr Ile Phe
      145              150              155              160
Val Leu Ser Ile Thr Val Ile Val Ala Phe Val Val Ala Phe His Asn
              165              170              175
Leu Ser Asp Ser Thr Asn Gln Gln Ser Val Gly Lys Met Glu Lys Gly
              180              185              190
Thr Val Asp Leu Lys Pro Glu Thr Ala Tyr Asn Leu Ile His Thr Ile
              195              200              205
Leu Phe Gly Phe Leu Ala Leu Ser Thr Met Arg Met Lys Tyr Leu Trp
      210              215              220
Thr Ser His Met Cys Val Phe Ala Ser Phe Gly Leu Cys Ser Pro Glu
      225              230              235              240
Ile Trp Glu Leu Leu Leu Lys Ser Val His Leu Tyr Asn Pro Lys Arg
              245              250              255
Ile Cys Ile Met Arg Tyr Ser Val Pro Ile Leu Ile Leu Leu Tyr Leu

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260 265 270  
 Cys Tyr Lys Asn Gln Lys Ser  
 275

<210> 4163

<211> 221

<212> PRT

<213> Homo sapiens

<400> 4163

Met Ala Ser Ser Thr Ser Leu Pro Ala Pro Gly Ser Arg Pro Lys Lys  
 1 5 10 15  
 Pro Leu Gly Lys Met Ala Asp Trp Phe Arg Gln Thr Leu Leu Lys Lys  
 20 25 30  
 Pro Lys Lys Arg Pro Asn Ser Pro Glu Ser Thr Ser Ser Asp Ala Ser  
 35 40 45  
 Gln Pro Thr Ser Gln Asp Asn Pro Leu Pro Pro Ser Leu Ser Ser Val  
 50 55 60  
 Thr Ser Pro Ser Leu Pro Pro Thr His Ala Ser Asp Ser Gly Ser Ser  
 65 70 75 80  
 Arg Trp Ser Lys Asp Tyr Asp Val Cys Val Cys His Ser Glu Glu Asp  
 85 90 95  
 Leu Val Ala Ala Gln Asp Leu Val Ser Tyr Leu Glu Gly Ser Thr Ala  
 100 105 110  
 Ser Leu Arg Cys Phe Leu Gln Leu Arg Asp Ala Thr Pro Gly Gly Ala  
 115 120 125  
 Ile Val Ser Glu Leu Cys Gln Ala Leu Ser Ser Ser His Cys Arg Val  
 130 135 140  
 Leu Leu Ile Thr Pro Gly Phe Leu Gln Asp Pro Trp Cys Lys Tyr Gln  
 145 150 155 160  
 Met Leu Gln Ala Leu Thr Glu Ala Pro Gly Ala Glu Gly Cys Thr Ile  
 165 170 175  
 Pro Leu Leu Ser Gly Leu Ser Arg Ala Ala Tyr Pro Pro Glu Leu Arg  
 180 185 190  
 Phe Met Tyr Tyr Val Asp Gly Arg Gly Pro Asp Gly Gly Phe Arg Gln

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Val Lys Glu Ala Val Met Arg Tyr Leu Gln Thr Leu Ser |     |     |
| 210   | 215 | 220 |

&lt;210&gt; 4164

&lt;211&gt; 458

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4164

|   |     |     |     |
|---|-----|-----|-----|
| Met Glu Glu Glu Lys Asp Asp Ser Pro Gln Ala Asp Phe Cys Leu Gly |     |     |     |
| 1   | 5   | 10  | 15  |
| Thr Ala Leu His Ser Trp Gly Leu Trp Phe Thr Glu Glu Gly Ser Pro |     |     |     |
| 20  | 25  | 30  |     |
| Ser Thr Met Leu Thr Gly Ile Ala Val Gly Ala Leu Leu Ala Leu Ala |     |     |     |
| 35  | 40  | 45  |     |
| Leu Val Gly Val Leu Ile Leu Phe Met Phe Arg Arg Leu Arg Gln Phe |     |     |     |
| 50  | 55  | 60  |     |
| Arg Gln Ala Gln Pro Thr Pro Gln Tyr Arg Phe Arg Lys Arg Asp Lys |     |     |     |
| 65  | 70  | 75  | 80  |
| Val Met Phe Tyr Gly Arg Lys Ile Met Arg Lys Val Thr Thr Leu Pro |     |     |     |
| 85  | 90  | 95  |     |
| Asn Thr Leu Val Glu Asn Thr Ala Leu Pro Arg Gln Arg Ala Arg Lys |     |     |     |
| 100   | 105 | 110 |     |
| Arg Thr Lys Val Leu Ser Leu Ala Lys Arg Ile Leu Arg Phe Lys Lys |     |     |     |
| 115   | 120 | 125 |     |
| Glu Tyr Pro Ala Leu Gln Pro Lys Glu Pro Pro Pro Ser Leu Leu Glu |     |     |     |
| 130   | 135 | 140 |     |
| Ala Asp Leu Thr Glu Phe Asp Val Lys Asn Ser His Leu Pro Ser Glu |     |     |     |
| 145   | 150 | 155 | 160 |
| Val Leu Tyr Met Leu Lys Asn Val Arg Val Leu Gly His Phe Glu Lys |     |     |     |
| 165   | 170 | 175 |     |
| Pro Leu Phe Leu Glu Leu Cys Lys His Ile Val Phe Val Gln Leu Gln |     |     |     |
| 180   | 185 | 190 |     |
| Glu Gly Glu His Val Leu Gln Pro Arg Glu Pro Asp Pro Ser Ile Cys |     |     |     |

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Val Val Gln Asp Gly Arg Leu Glu Val Cys Ile Gln Asp Thr Asp Gly |     |     |
| 210   | 215 | 220 |
| Thr Glu Val Val Val Lys Glu Val Leu Ala Gly Asp Ser Val His Ser |     |     |
| 225   | 230 | 235 |
| Leu Leu Ser Ile Leu Asp Ile Ile Thr Gly His Ala Ala Pro Tyr Lys |     |     |
| 245   | 250 | 255 |
| Thr Val Ser Val Arg Ala Ala Ile Pro Ser Thr Ile Leu Arg Leu Pro |     |     |
| 260   | 265 | 270 |
| Ala Ala Ala Phe His Gly Val Phe Glu Lys Tyr Pro Glu Thr Leu Val |     |     |
| 275   | 280 | 285 |
| Arg Val Val Gln Ile Ile Met Val Arg Leu Gln Arg Val Thr Phe Leu |     |     |
| 290   | 295 | 300 |
| Ala Leu His Asn Tyr Leu Gly Leu Thr Thr Glu Leu Phe Asn Ala Glu |     |     |
| 305   | 310 | 315 |
| Ser Gln Ala Ile Pro Leu Val Ser Val Ala Ser Val Ala Ala Gly Lys |     |     |
| 325   | 330 | 335 |
| Ala Lys Lys Gln Val Phe Tyr Gly Glu Glu Glu Arg Leu Lys Lys Pro |     |     |
| 340   | 345 | 350 |
| Pro Arg Leu Gln Glu Ser Cys Asp Ser Asp His Gly Gly Gly Arg Pro |     |     |
| 355   | 360 | 365 |
| Ala Ala Ala Gly Pro Leu Leu Lys Arg Ser His Ser Val Pro Ala Pro |     |     |
| 370   | 375 | 380 |
| Ser Ile Arg Lys Gln Ile Leu Glu Glu Leu Glu Lys Pro Gly Ala Gly |     |     |
| 385   | 390 | 395 |
| Asp Pro Asp Pro Ser Ala Pro Gln Ala Arg Val Leu Cys Leu Leu Pro |     |     |
| 405   | 410 | 415 |
| Gln Cys Leu Gly Gly Leu Pro Pro Thr Asp Thr Ser Val Tyr Ser Ser |     |     |
| 420   | 425 | 430 |
| Ala Ser Ser Asp Cys Cys Gly Cys Ser Met Pro Val Leu Cys Ile Met |     |     |
| 435   | 440 | 445 |
| Gly His Lys Pro His Val Thr Val Asp Thr                         |     |     |
| 450   | 455 |     |

&lt;210&gt; 4165

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4165

Met Cys His His Ala Arg Leu Ile Val Phe Val Phe Leu Val Glu Thr  
 1 5 10 15  
 Gly Phe Leu His Val Gly Gln Ala Gly Leu Glu Leu Leu Thr Ser Gly  
 20 25 30  
 Asp Pro Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser  
 35 40 45  
 His Cys Ala Gln Pro Thr Ile Ser Tyr Phe His Val Phe Leu Cys Val  
 50 55 60  
 Leu Phe Tyr Phe Ser Arg Trp Ser Leu Ser Val Ala Gln Ala Gly Val  
 65 70 75 80  
 Gln Trp Arg Asp Leu Gly Ser Leu Pro Gly Phe Lys Arg Phe Ser Cys  
 85 90 95  
 Leu Ser Leu Pro Ser Asn Trp Asp Cys Arg His Pro Pro Ser Cys Pro  
 100 105 110  
 Ala Lys Phe Cys Thr Phe Val Glu Met Glu Phe His His Val Gly Gln  
 115 120 125  
 Ala Gly Leu Glu Leu Leu Thr Ser Gly Asp Leu Pro Thr Leu Ala Ser  
 130 135 140  
 Gln Ser Ala Gly Ile Thr Gly Val Ser His His Ala Trp Thr Arg Cys  
 145 150 155 160  
 Cys Cys Cys Phe

&lt;210&gt; 4166

&lt;211&gt; 165

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4166

Met Pro Thr Met Ser Ser Lys Val Leu Asp Ser Leu Val Val Ala Leu



|                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| 1               | 5               | 10              | 15              |
| Leu Ser Tyr Trp | Leu Asp Asn Pro | Lys His Cys Arg | Lys Leu His Ser |
| 20              | 25              | 30              |                 |
| Ala Pro Leu Gly | Leu Pro Gly Ser | Ile Arg Leu Leu | Pro Leu Leu Ser |
| 35              | 40              | 45              |                 |
| Leu Gly Thr His | Leu Ser Lys Ser | Ser Ile Leu Lys | Arg Lys Phe Leu |
| 50              | 55              | 60              |                 |
| Phe Trp Arg Ser | Phe Val Asn Lys | Thr Ser Ile Gly | Trp Ala Glu Trp |
| 65              | 70              | 75              | 80              |
| Leu Ile Thr Val | Ile Ser Ala Leu | Arg Asp Ala Lys | Val Gly Arg Ser |
| 85              | 90              | 95              |                 |
| Pro Glu Val Arg | Ser Leu Arg Pro | Ala Trp Pro Thr | Trp Trp Ser Pro |
| 100             | 105             | 110             |                 |
| Val Ser Thr Lys | Asn Thr Lys Lys | Leu Gly Arg Tyr | Gly Gly Ala Arg |
| 115             | 120             | 125             |                 |
| Leu Trp Ser Gln | Leu Phe Gly Arg | Leu Arg Gln Asp | Asn His Leu Asn |
| 130             | 135             | 140             |                 |
| Arg Gly Asp Arg | Gly Cys Ser Glu | Pro Arg Leu Cys | His Cys Pro Pro |
| 145             | 150             | 155             | 160             |
| Ala Trp Ala Thr | Lys             |                 |                 |
| 165             |                 |                 |                 |

&lt;210&gt; 4167

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4167

|                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| Met Pro Pro Arg | Leu Ala Asn Ile | Leu Tyr Phe Ser | Arg Asp Gly Gly |
| 1               | 5               | 10              | 15              |
| Phe Cys Arg Val | Gly Leu Ala Gly | Leu Lys Leu Leu | Ser Ser Gly Asp |
| 20              | 25              | 30              |                 |
| Pro Pro Ala Ser | Val Ser Arg Gly | Ala Gly Ile Thr | Gly Val Ser His |
| 35              | 40              | 45              |                 |
| Arg Ala Arg Pro | Leu Asn Thr Cys | Gly Pro Val Ile | His Pro Ala Leu |

50                      55                      60  
 Lys Arg Ser Ser His Leu Pro Phe Trp Glu Leu Gly Glu Thr Ala Gln  
 65                      70                      75                      80  
 Ile Val Thr Ala Pro Pro Pro Pro Arg Ala Pro Leu Thr Gly Leu Trp  
                     85                      90                      95  
 Val Glu Pro Ala Pro Val Pro Ala Pro Ser Thr Glu Ala Gly Thr Val  
                     100                      105                      110  
 His Thr Ala Ser Thr Ala Arg Pro Gly Glu Trp Ala Ala Val His Leu  
                     115                      120                      125  
 Gly Cys Pro Ala Gln Ser Gln Ala Ser Ala Glu Pro Ile Leu Pro His  
                     130                      135                      140  
 Cys Thr Gln His  
 145

<210> 4168

<211> 153

<212> PRT

<213> Homo sapiens

<400> 4168

Met Phe Ile Phe Gly Ser Arg Arg Thr Arg Ala Gly Val Leu Arg Val  
   1                      5                      10                      15  
 His Phe Arg Leu Lys Ala Tyr Thr Cys Arg Cys Ala Thr Cys Leu Phe  
                     20                      25                      30  
 Ser Val Gln Gly Val His Val Gln Val Cys Tyr Val Phe Ile Phe Gly  
                     35                      40                      45  
 Ser Arg Arg Thr Arg Ala Gly Val Leu Arg Val His Phe Arg Phe Lys  
                     50                      55                      60  
 Ala Tyr Thr Cys Arg Cys Val Thr Cys Ser Phe Ser Ala Gln Gly Val  
                     65                      70                      75                      80  
 His Val Gln Val Cys His Met Gly Lys Ser Ser Val Thr Gly Val Trp  
                     85                      90                      95  
 Cys Ala Asp Asn Phe Val Ala Gln Val Ile Ser Thr Val Pro Asp Val  
                     100                      105                      110  
 Phe Gln Ser Ser Pro Ser Ser His Ser Pro Pro Ser Thr Phe Ser Phe

115                      120                      125  
 Lys Lys Lys Phe Ser Ser Gln His Phe Gly Arg Leu Arg Arg Ala Asp  
 130                      135                      140  
 His Glu Val Arg Ser Ser Arg Ser Pro  
 145                      150

<210> 4169

<211> 369

<212> PRT

<213> Homo sapiens

<400> 4169

Met Tyr Ser Pro Ile Ile Tyr Gln Ala Leu Cys Glu His Val Gln Thr  
 1                      5                      10                      15  
 Gln Met Ser Leu Met Asn Asp Leu Thr Ser Lys Asn Ile Pro Asn Gly  
 20                      25                      30  
 Ile Pro Ala Val Pro Cys His Ala Pro Ser His Ser Glu Ser Gln Ala  
 35                      40                      45  
 Thr Pro His Ser Ser Tyr Gly Leu Cys Thr Ser Thr Pro Val Trp Ser  
 50                      55                      60  
 Leu Gln Arg Pro Pro Cys Pro Pro Lys Val His Ser Glu Val Gln Thr  
 65                      70                      75                      80  
 Asp Gly Asn Ser Gln Phe Ala Ser Gln Gly Lys Thr Val Ser Ala Thr  
 85                      90                      95  
 Cys Thr Asp Val Leu Arg Asn Ser Phe Asn Thr Ser Pro Gly Val Pro  
 100                      105                      110  
 Cys Ser Leu Pro Lys Thr Asp Ile Ser Ala Ile Pro Thr Leu Gln Gln  
 115                      120                      125  
 Leu Gly Leu Val Asn Gly Ile Leu Pro Gln Gln Gly Ile His Lys Glu  
 130                      135                      140  
 Thr Asp Leu Leu Lys Cys Ile Gln Thr Tyr Leu Ser Leu Phe Arg Ser  
 145                      150                      155                      160  
 His Gly Lys Glu Pro His Leu Asp Ser Gln Thr His Arg Ser Pro Thr  
 165                      170                      175

Gln Ser Gln Pro Ala Phe Leu Ala Thr Asn Glu Glu Ile Cys Ala Arg  
                   180                  185                  190  
 Glu Gln Ile Arg Glu Ala Thr Ser Glu Arg Lys Asp Leu Asn Ile His  
                   195                  200                  205  
 Val Arg Asp Thr Lys Thr Val Lys Asp Val Gln Lys Ala Lys Asn Val  
                   210                  215                  220  
 Asn Lys Thr Ala Glu Lys Val Arg Ile Ile Lys Tyr Leu Leu Gly Glu  
 225                  230                  235                  240  
 Leu Lys Ala Leu Val Ala Glu Gln Glu Asp Ser Glu Ile Gln Arg Leu  
                   245                  250                  255  
 Ile Thr Glu Met Glu Ala Cys Ile Ser Val Leu Pro Thr Val Ser Gly  
                   260                  265                  270  
 Asn Thr Asp Ile Gln Val Glu Ile Ala Leu Ala Met Gln Pro Leu Arg  
                   275                  280                  285  
 Ser Glu Asn Ala Gln Leu Arg Arg Gln Leu Arg Ile Leu Asn Gln Gln  
                   290                  295                  300  
 Leu Arg Glu Gln Gln Lys Thr Gln Lys Pro Ser Gly Ala Val Asp Cys  
 305                  310                  315                  320  
 Asn Leu Glu Leu Phe Ser Leu Gln Ser Leu Asn Met Ser Leu Gln Asn  
                   325                  330                  335  
 Gln Leu Glu Glu Ser Leu Lys Ser Gln Glu Leu Leu Gln Ser Lys Asn  
                   340                  345                  350  
 Glu Glu Leu Leu Lys Val Ile Glu Asn Gln Lys Asp Glu Asn Lys Lys  
                   355                  360                  365  
 Ile

<210> 4170

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4170

Met Pro Gln Ser Arg Arg Gln Trp Asp Phe Glu Gly Gly Lys Gly Arg

|   |     |    |    |
|---|-----|----|----|
| 1   | 5   | 10 | 15 |
| Arg Gln Ala Gly His Ala Leu Arg Gly Ala Arg Thr His Leu Leu His |     |    |    |
| 20  | 25  | 30 |    |
| Pro His Val Phe Arg Ala Leu Ser Leu Trp Glu Ala Phe Phe Arg Thr |     |    |    |
| 35  | 40  | 45 |    |
| Ala Leu Val Asn Trp Lys Arg Asn Pro Ser Pro Trp Trp Pro Cys Ser |     |    |    |
| 50  | 55  | 60 |    |
| Asp Leu Asp Leu Ser Glu Val Thr Leu Pro Leu Arg Ala Leu Gln Ser |     |    |    |
| 65  | 70  | 75 | 80 |
| Leu Leu Ala Gly Gly Gly Thr Ser Pro Ser His Ser His Phe Leu Thr |     |    |    |
| 85  | 90  | 95 |    |
| Leu Ser Leu Cys Ile Thr Gly Ser Leu Leu                         |     |    |    |
| 100   | 105 |    |    |

&lt;210&gt; 4171

&lt;211&gt; 337

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4171

|   |     |     |    |
|---|-----|-----|----|
| Met Asn Glu Pro Leu Asp Tyr Leu Ala Asn Ala Ser Asp Phe Pro Asp |     |     |    |
| 1   | 5   | 10  | 15 |
| Tyr Ala Ala Ala Phe Gly Asn Cys Thr Asp Glu Asn Ile Pro Leu Lys |     |     |    |
| 20  | 25  | 30  |    |
| Met His Tyr Leu Pro Val Ile Tyr Gly Ile Ile Phe Leu Val Gly Phe |     |     |    |
| 35  | 40  | 45  |    |
| Pro Gly Asn Ala Val Val Ile Ser Thr Tyr Ile Phe Lys Met Arg Pro |     |     |    |
| 50  | 55  | 60  |    |
| Trp Lys Ser Ser Thr Ile Ile Met Leu Asn Leu Ala Cys Thr Asp Leu |     |     |    |
| 65  | 70  | 75  | 80 |
| Leu Tyr Leu Thr Ser Leu Pro Phe Leu Ile His Tyr Tyr Ala Ser Gly |     |     |    |
| 85  | 90  | 95  |    |
| Glu Asn Trp Ile Phe Gly Asp Phe Met Cys Lys Phe Ile Arg Phe Ser |     |     |    |
| 100   | 105 | 110 |    |
| Phe His Phe Asn Leu Tyr Ser Ser Ile Leu Phe Leu Thr Cys Phe Ser |     |     |    |

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Ile Phe Arg Tyr Cys Val Ile Ile His Pro Met Ser Cys Phe Ser Ile |     |     |
| 130   | 135 | 140 |
| His Lys Thr Arg Cys Ala Val Val Ala Cys Ala Val Val Trp Ile Ile |     |     |
| 145   | 150 | 155 |
| Ser Leu Val Ala Val Ile Pro Met Thr Phe Leu Ile Thr Ser Thr Asn |     |     |
| 165   | 170 | 175 |
| Arg Thr Asn Arg Ser Ala Cys Leu Asp Leu Thr Ser Ser Asp Glu Leu |     |     |
| 180   | 185 | 190 |
| Asn Thr Ile Lys Trp Tyr Asn Leu Ile Leu Thr Ala Thr Thr Phe Cys |     |     |
| 195   | 200 | 205 |
| Leu Pro Leu Val Ile Val Thr Leu Cys Tyr Thr Thr Ile Ile His Thr |     |     |
| 210   | 215 | 220 |
| Leu Thr His Gly Leu Gln Thr Asp Ser Cys Leu Lys Gln Lys Ala Arg |     |     |
| 225   | 230 | 235 |
| Arg Leu Thr Ile Leu Leu Leu Leu Ala Phe Tyr Val Cys Phe Leu Pro |     |     |
| 245   | 250 | 255 |
| Phe His Ile Leu Arg Val Ile Arg Ile Glu Ser Arg Leu Leu Ser Ile |     |     |
| 260   | 265 | 270 |
| Ser Cys Ser Ile Glu Asn Gln Ile His Glu Ala Tyr Ile Val Ser Arg |     |     |
| 275   | 280 | 285 |
| Pro Leu Ala Ala Leu Asn Thr Phe Gly Asn Leu Leu Leu Tyr Val Val |     |     |
| 290   | 295 | 300 |
| Val Ser Asp Asn Phe Gln Gln Ala Val Cys Ser Thr Val Arg Cys Lys |     |     |
| 305   | 310 | 315 |
| Val Ser Gly Asn Leu Glu Gln Ala Lys Lys Ile Ser Tyr Ser Asn Asn |     |     |
| 325   | 330 | 335 |
| Pro   |     |     |

&lt;210&gt; 4172

&lt;211&gt; 595

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4172

Met Ser Arg His Glu Ile Gln Gly Lys Lys Met Ala Tyr Gln Lys Val  
 1 5 10 15  
 His Ala Asp Gln Arg Ala Pro Gly His Ser Gln Tyr Leu Asp Asn Asp  
 20 25 30  
 Asp Leu Gln Ala Thr Ala Leu Asp Leu Glu Trp Asp Met Glu Lys Glu  
 35 40 45  
 Leu Glu Glu Ser Gly Phe Asp Gln Phe Gln Leu Asp Ser Ala Glu Asn  
 50 55 60  
 Gln Asn Leu Gly His Ser Glu Thr Ile Asp Leu Asn Leu Asp Ser Ile  
 65 70 75 80  
 Gln Pro Ala Thr Ser Pro Lys Gly Arg Phe Gln Arg Leu Gln Glu Glu  
 85 90 95  
 Ser Asp Tyr Ile Thr His Tyr Thr Arg Ser Ala Pro Lys Ser Asn Arg  
 100 105 110  
 Cys Asn Phe Cys His Val Leu Lys Met Leu Cys Thr Ala Thr Ile Leu  
 115 120 125  
 Phe Ile Phe Gly Ile Leu Ile Gly Tyr Tyr Val His Thr Asn Cys Pro  
 130 135 140  
 Ser Asp Ala Pro Ser Ser Gly Thr Val Asp Pro Gln Leu Tyr Gln Glu  
 145 150 155 160  
 Ile Leu Lys Thr Ile Gln Ala Glu Asp Ile Lys Lys Ser Phe Arg Asn  
 165 170 175  
 Leu Val Gln Leu Tyr Lys Asn Glu Asp Asp Thr Glu Ile Ser Lys Lys  
 180 185 190  
 Ile Lys Thr Gln Trp Thr Ser Leu Gly Leu Glu Asp Val Gln Phe Val  
 195 200 205  
 Asn Tyr Ser Val Leu Leu Asp Leu Pro Gly Pro Ser Pro Ser Thr Val  
 210 215 220  
 Thr Leu Ser Ser Ser Gly Gln Cys Phe His Pro Asn Gly Gln Pro Cys  
 225 230 235 240  
 Ser Glu Glu Ala Arg Lys Asp Ser Ser Gln Asp Leu Leu Tyr Ser Tyr  
 245 250 255  
 Ala Ala Tyr Ser Ala Lys Gly Thr Leu Lys Ala Glu Val Ile Asp Val  
 260 265 270  
 Ser Tyr Gly Met Ala Asp Asp Leu Lys Arg Ile Arg Lys Ile Lys Asn

|   |     |     |
|---|-----|-----|
| 275   | 280 | 285 |
| Val Thr Asn Gln Ile Ala Leu Leu Lys Leu Gly Lys Leu Pro Leu Leu |     |     |
| 290   | 295 | 300 |
| Tyr Lys Leu Ser Ser Leu Glu Lys Ala Gly Phe Gly Gly Val Leu Leu |     |     |
| 305   | 310 | 315 |
| Tyr Ile Asp Pro Cys Asp Leu Pro Lys Thr Val Asn Pro Ser His Asp |     |     |
| 325   | 330 | 335 |
| Thr Phe Met Val Ser Leu Asn Pro Gly Gly Asp Pro Ser Thr Pro Gly |     |     |
| 340   | 345 | 350 |
| Tyr Pro Ser Val Asp Glu Ser Phe Arg Gln Ser Arg Ser Asn Leu Thr |     |     |
| 355   | 360 | 365 |
| Ser Leu Leu Val Gln Pro Ile Ser Ala Ser Leu Val Ala Lys Leu Ile |     |     |
| 370   | 375 | 380 |
| Ser Ser Pro Lys Ala Arg Thr Lys Asn Glu Ala Cys Ser Ser Leu Glu |     |     |
| 385   | 390 | 395 |
| Leu Pro Asn Asn Glu Ile Arg Val Val Ser Met Gln Val Gln Thr Val |     |     |
| 405   | 410 | 415 |
| Thr Lys Leu Lys Thr Val Thr Asn Val Val Gly Phe Val Met Gly Leu |     |     |
| 420   | 425 | 430 |
| Thr Ser Pro Asp Arg Tyr Ile Ile Val Gly Ser His His His Thr Ala |     |     |
| 435   | 440 | 445 |
| His Ser Tyr Asn Gly Gln Glu Trp Ala Ser Ser Thr Ala Ile Ile Thr |     |     |
| 450   | 455 | 460 |
| Ala Phe Ile Arg Ala Leu Met Ser Lys Val Lys Arg Gly Trp Arg Pro |     |     |
| 465   | 470 | 475 |
| Asp Arg Thr Ile Val Phe Cys Ser Trp Gly Gly Thr Ala Phe Gly Asn |     |     |
| 485   | 490 | 495 |
| Ile Gly Ser Tyr Glu Arg Gly Glu Asp Phe Lys Lys Val Leu Gln Lys |     |     |
| 500   | 505 | 510 |
| Asn Val Val Ala Tyr Ile Ser Leu His Ser Pro Ile Arg Gly Asn Ser |     |     |
| 515   | 520 | 525 |
| Ser Leu Tyr Pro Val Ala Ser Pro Ser Leu Gln Gln Leu Val Val Glu |     |     |
| 530   | 535 | 540 |
| Lys Asn Asn Phe Asn Cys Thr Arg Arg Ala Gln Cys Pro Glu Thr Asn |     |     |
| 545   | 550 | 555 |
| Ile Ser Ser Ile Gln Ile Gln Gly Asp Ala Asp Tyr Phe Ile Asn His |     |     |



565                      570                      575  
 Leu Gly Val Pro Ile Val Gln Phe Ala Tyr Glu Asp Ile Lys Thr Leu  
 580                      585                      590  
 Glu Ala Glu  
 595

<210> 4173

<211> 102

<212> PRT

<213> Homo sapiens

<400> 4173

Met Ala Lys Ala Pro Phe Tyr His Leu Leu Phe Cys Phe Gly Ile Trp  
 1                      5                      10                      15  
 Ser Asp Ser Tyr Ser Ser Leu Gly Leu Ala Gln Trp Arg Asn Trp Cys  
 20                      25                      30  
 Ser Tyr Cys Thr Gly Leu Cys Thr Pro Cys Asn Cys Asp Val Tyr Asp  
 35                      40                      45  
 Cys Ser Ser Cys Phe Pro Ile Leu His Phe Gln Ser Pro Arg Ala Val  
 50                      55                      60  
 Leu Ser Arg Thr Thr Lys Leu Pro Arg Ile Lys Pro Pro Asn Met Ala  
 65                      70                      75                      80  
 Tyr Pro Cys Ser Ser Asp Val Ile Leu Val Ala Ser Val Asn Ser Val  
 85                      90                      95  
 Cys His Ala Val Gln Thr  
 100

<210> 4174

<211> 112

<212> PRT

<213> Homo sapiens

<400> 4174

Met Ile Ile Pro Gly Lys Gly Phe Leu Val Leu Cys Asn Pro Lys Gly

|   |     |     |    |
|---|-----|-----|----|
| 1   | 5   | 10  | 15 |
| Arg Asn Ser Pro Met Gly Gly Arg Ile Leu Leu Gly Met Lys Lys Phe |     |     |    |
| 20  | 25  | 30  |    |
| Leu Phe Pro Cys His Glu Cys Pro Ala Arg Glu Gln Gly Gly Ser Val |     |     |    |
| 35  | 40  | 45  |    |
| Arg Glu Gly Leu Ser Ser Trp Arg Lys Trp Asp Ser Lys Ser Arg Met |     |     |    |
| 50  | 55  | 60  |    |
| Leu Arg Leu Ser Gly Ser Gln Arg Gly Gly Ser Lys Cys Gly Met Trp |     |     |    |
| 65  | 70  | 75  | 80 |
| Val Ala Leu Trp Phe Ser Gly Ser Val Val Val Pro Ser Thr Ala Asp |     |     |    |
| 85  | 90  | 95  |    |
| Phe Met Thr Pro His Leu Ser Pro Ser His Ile Val Tyr Pro Ser Val |     |     |    |
| 100   | 105 | 110 |    |

&lt;210&gt; 4175

&lt;211&gt; 712

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4175

|   |     |     |    |
|---|-----|-----|----|
| Met Pro Asp Gln Asp Lys Lys Val Lys Thr Thr Glu Lys Ser Thr Asp |     |     |    |
| 1   | 5   | 10  | 15 |
| Lys Gln Gln Glu Ile Thr Ile Arg Asp Tyr Ser Asp Leu Lys Arg Leu |     |     |    |
| 20  | 25  | 30  |    |
| Arg Cys Leu Leu Asn Val Gln Ser Ser Lys Gln Gln Leu Pro Ala Ile |     |     |    |
| 35  | 40  | 45  |    |
| Asn Phe Asp Ser Ala Gln Asn Ser Met Thr Lys Ser Glu Pro Ala Ile |     |     |    |
| 50  | 55  | 60  |    |
| Arg Ala Gly Gly His Arg Ala Arg Gly Gln Trp His Glu Ser Thr Glu |     |     |    |
| 65  | 70  | 75  | 80 |
| Ala Val Glu Leu Glu Asn Phe Ser Ile Asn Tyr Lys Asn Glu Arg Asn |     |     |    |
| 85  | 90  | 95  |    |
| Phe Ser Lys His Pro Gln Arg Lys Leu Phe Gln Glu Ile Phe Thr Ala |     |     |    |
| 100   | 105 | 110 |    |
| Leu Val Lys Asn Arg Leu Ile Ser Arg Glu Trp Val Asn Arg Ala Pro |     |     |    |

|                             |                         |             |
|-----------------------------|-------------------------|-------------|
| 115                         | 120                     | 125         |
| Ser Ile His Phe Leu Arg Val | Leu Ile Cys Leu Arg Leu | Leu Met Arg |
| 130                         | 135                     | 140         |
| Asp Pro Cys Tyr Gln Glu Ile | Leu His Ser Leu Gly Gly | Ile Glu Asn |
| 145                         | 150                     | 155         |
| Leu Ala Gln Tyr Met Glu Ile | Val Ala Asn Glu Tyr Leu | Gly Tyr Gly |
| 165                         | 170                     | 175         |
| Glu Glu Gln His Thr Val Asp | Lys Leu Val Asn Met Thr | Tyr Ile Phe |
| 180                         | 185                     | 190         |
| Gln Lys Leu Ala Ala Val Lys | Asp Gln Arg Glu Trp Val | Thr Thr Ser |
| 195                         | 200                     | 205         |
| Gly Ala His Lys Thr Leu Val | Asn Leu Leu Gly Ala Arg | Asp Thr Asn |
| 210                         | 215                     | 220         |
| Val Leu Leu Gly Ser Leu Leu | Ala Leu Ala Ser Leu Ala | Glu Ser Gln |
| 225                         | 230                     | 235         |
| 240                         |                         |             |
| Glu Cys Arg Glu Lys Ile Ser | Glu Leu Asn Ile Val Glu | Asn Leu Leu |
| 245                         | 250                     | 255         |
| Met Ile Leu His Glu Tyr Asp | Leu Leu Ser Lys Arg Leu | Thr Ala Glu |
| 260                         | 265                     | 270         |
| Leu Leu Arg Leu Leu Cys Ala | Glu Pro Gln Val Lys Glu | Gln Val Lys |
| 275                         | 280                     | 285         |
| Leu Tyr Glu Gly Ile Pro Val | Leu Leu Ser Leu Leu His | Ser Asp His |
| 290                         | 295                     | 300         |
| Leu Lys Leu Leu Trp Ser Ile | Val Trp Ile Leu Val Gln | Val Cys Glu |
| 305                         | 310                     | 315         |
| 320                         |                         |             |
| Asp Pro Glu Thr Ser Val Glu | Ile Arg Ile Trp Gly Gly | Ile Lys Gln |
| 325                         | 330                     | 335         |
| Leu Leu His Ile Leu Gln Gly | Asp Arg Asn Phe Val Ser | Asp His Ser |
| 340                         | 345                     | 350         |
| Ser Ile Gly Ser Leu Ser Ser | Ala Asn Ala Ala Gly Arg | Ile Gln Gln |
| 355                         | 360                     | 365         |
| Leu His Leu Ser Glu Asp Leu | Ser Pro Arg Glu Ile Gln | Glu Asn Thr |
| 370                         | 375                     | 380         |
| Phe Ser Leu Gln Ala Ala Cys | Cys Ala Ala Leu Thr Glu | Leu Val Leu |
| 385                         | 390                     | 395         |
| 400                         |                         |             |

Asn Asp Thr Asn Ala His Gln Val Val Gln Glu Asn Gly Val Tyr Thr  
 405 410 415  
 Ile Ala Lys Leu Ile Leu Pro Asn Lys Gln Lys Asn Ala Ala Lys Ser  
 420 425 430  
 Asn Leu Leu Gln Cys Tyr Ala Phe Arg Ala Leu Arg Phe Leu Phe Ser  
 435 440 445  
 Met Glu Arg Asn Arg Pro Leu Phe Lys Arg Leu Phe Pro Thr Asp Leu  
 450 455 460  
 Phe Glu Ile Phe Ile Asp Ile Gly His Tyr Val Arg Asp Ile Ser Ala  
 465 470 475 480  
 Tyr Glu Glu Leu Val Ser Lys Leu Asn Leu Leu Val Glu Asp Glu Leu  
 485 490 495  
 Lys Gln Ile Ala Glu Asn Ile Glu Ser Ile Asn Gln Asn Lys Ala Pro  
 500 505 510  
 Leu Lys Tyr Ile Gly Asn Tyr Ala Ile Leu Asp His Leu Gly Ser Gly  
 515 520 525  
 Ala Phe Gly Cys Val Tyr Lys Val Arg Lys His Ser Gly Gln Asn Leu  
 530 535 540  
 Leu Ala Met Lys Glu Val Asn Leu His Asn Pro Ala Phe Gly Lys Asp  
 545 550 555 560  
 Lys Lys Asp Arg Asp Ser Ser Val Arg Asn Ile Val Ser Glu Leu Thr  
 565 570 575  
 Ile Ile Lys Glu Gln Leu Tyr His Pro Asn Ile Val Arg Tyr Tyr Lys  
 580 585 590  
 Thr Phe Leu Glu Asn Asp Arg Leu Tyr Ile Val Met Glu Leu Ile Glu  
 595 600 605  
 Gly Ala Pro Leu Gly Glu His Phe Ser Ser Leu Lys Glu Lys His His  
 610 615 620  
 His Phe Thr Glu Glu Arg Leu Trp Lys Ile Phe Ile Gln Leu Cys Leu  
 625 630 635 640  
 Ala Leu Arg Tyr Leu His Lys Glu Lys Arg Ile Val His Arg Asp Leu  
 645 650 655  
 Thr Pro Asn Asn Ile Met Leu Gly Asp Lys Asp Lys Val Thr Val Thr  
 660 665 670  
 Asp Phe Gly Leu Ala Lys Gln Lys Gln Glu Asn Ser Lys Leu Thr Ser  
 675 680 685

Val Val Gly Thr Ile Leu Tyr Ser Cys Val Gln His Leu Tyr Leu Arg  
 690 695 700  
 Ser Pro Ala Pro Ala Leu Ala Thr  
 705 710

<210> 4176

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4176

Met Ser Arg Leu Gly Pro Pro Ala Arg Ile Leu Pro Ser Met Pro Trp  
 1 5 10 15  
 Lys Met Thr Cys Ser Trp Leu Tyr Val Phe Pro Leu Asn Thr Asp Cys  
 20 25 30  
 Thr Ser Glu Leu Thr Glu Ala Leu Thr Pro Ser Arg Arg Ser Pro Ala  
 35 40 45  
 Ala Gly Trp Gly His Gly Gly Ala Val Pro His Phe Leu Arg Ala Pro  
 50 55 60  
 Pro Pro His Gln Gly Leu Leu Pro Cys His Gly Gly Val Pro Leu Pro  
 65 70 75 80  
 Ser Ser Ser Pro Thr Gly Val Pro Ser Ser Pro Ala Thr Ser Leu Val  
 85 90 95  
 Ser Gly Cys Pro His Pro Gly His Ser Gly Gly Glu Gly Val Gly Gly  
 100 105 110  
 Gly Trp Glu Pro Arg  
 115

<210> 4177

<211> 457

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4177

Met Ser Asp Ala Asn Lys Ala Ala Ile Ala Ala Glu Arg Glu Ala Leu  
 1 5 10 15  
 Asn Leu Lys Leu Pro Pro Ile Val His Leu Pro Glu Asn Ile Gly Ala  
 20 25 30  
 Asp Thr Pro Thr Gln Ser Lys Leu Leu Lys Tyr Arg Arg Ser Lys Glu  
 35 40 45  
 Gln Gln Gln Lys Ile Asn Gln Leu Val Ile Asp Gly Ala Lys Arg Asn  
 50 55 60  
 Leu Asp Arg Thr Leu Gly Lys Arg Thr Pro Leu Leu Pro Pro Pro Asp  
 65 70 75 80  
 Tyr Pro Gln Thr Met Thr Ser Glu Met Lys Lys Lys Gly Phe Asn Tyr  
 85 90 95  
 Ile Tyr Met Lys Gln Cys Val Glu Ser Ser Pro Leu Val Pro Ile Gln  
 100 105 110  
 Gln Glu Trp Leu Asp His Met Leu Arg Leu Ile Pro Glu Ser Leu Lys  
 115 120 125  
 Glu Gly Lys Glu Arg Glu Glu Leu Leu Glu Ser Leu Ile Asn Glu Val  
 130 135 140  
 Ser Ser Asp Phe Glu Asn Ser Met Lys Arg Tyr Leu Val Gln Ser Val  
 145 150 155 160  
 Leu Val Lys Pro Pro Val Lys Ser Leu Glu Asp Glu Gly Gly Pro Leu  
 165 170 175  
 Pro Glu Ser Pro Val Gly Leu Asp Tyr Ser Asn Pro Trp His Ser Ser  
 180 185 190  
 Tyr Val Gln Ala Arg Asn Gln Ile Phe Ser Asn Leu His Ile Ile His  
 195 200 205  
 Pro Thr Met Lys Met Leu Leu Asp Leu Gly Tyr Thr Thr Phe Ala Asp  
 210 215 220  
 Thr Val Leu Leu Asp Phe Thr Gly Ile Arg Ala Lys Gly Pro Ile Asp  
 225 230 235 240  
 Cys Glu Ser Leu Lys Thr Asp Leu Ser Ile Gln Thr Arg Asn Ala Glu  
 245 250 255  
 Glu Lys Ile Met Asn Thr Trp Tyr Pro Lys Val Ile Asn Leu Phe Thr  
 260 265 270

Lys Lys Glu Ala Leu Glu Gly Val Lys Pro Glu Lys Leu Asp Ala Phe  
 275 280 285  
 Tyr Ser Cys Val Ser Thr Leu Met Ser Asn Gln Leu Lys Asp Leu Leu  
 290 295 300  
 Arg Arg Thr Val Glu Gly Phe Val Lys Leu Phe Asp Pro Lys Asp Gln  
 305 310 315 320  
 Gln Arg Leu Pro Ile Phe Lys Ile Glu Leu Thr Phe Asp Asp Asp Lys  
 325 330 335  
 Met Glu Phe Tyr Pro Thr Phe Gln Asp Leu Glu Asp Asn Val Leu Ser  
 340 345 350  
 Leu Val Glu Arg Ile Ala Glu Ala Leu Gln Asn Val Gln Thr Ile Pro  
 355 360 365  
 Ser Trp Leu Ser Gly Thr Ser Thr Pro Val Asn Leu Asp Thr Glu Leu  
 370 375 380  
 Pro Glu His Val Leu His Trp Ala Val Asp Thr Leu Lys Ala Ala Val  
 385 390 395 400  
 His Arg Asn Leu Glu Gly Ala Arg Lys His Tyr Glu Thr Tyr Val Glu  
 405 410 415  
 Lys Tyr Asn Trp Leu Leu Asp Gly Thr Ala Val Glu Asn Ile Glu Thr  
 420 425 430  
 Phe Gln Thr Glu Asp His Thr Phe Asp Glu Tyr Thr Glu Glu Leu Asp  
 435 440 445  
 Cys Trp Val Val Trp Glu Val Tyr Phe  
 450 455

<210> 4178

<211> 190

<212> PRT

<213> Homo sapiens

<400> 4178

Met Leu Phe Tyr Leu Ser Gly Thr Tyr Tyr Ala Leu Tyr Phe Leu Ala  
 1 5 10 15  
 Thr Leu Leu Met Ile Thr Tyr Lys Ser Gln Val Phe Ser Tyr Pro His

|   |     |     |     |
|---|-----|-----|-----|
|   | 20  | 25  | 30  |
| Arg Tyr Leu Val Leu Asp Leu Ala Leu Leu Phe Leu Met Gly Ile Leu |     |     |     |
| 35  | 40  | 45  |     |
| Glu Ala Val Arg Leu Tyr Leu Gly Thr Arg Gly Asn Leu Thr Glu Ala |     |     |     |
| 50  | 55  | 60  |     |
| Glu Arg Pro Leu Ala Ala Ser Leu Ala Leu Thr Ala Gly Thr Ala Leu |     |     |     |
| 65  | 70  | 75  | 80  |
| Leu Ser Ala His Phe Leu Leu Trp Gln Ala Leu Val Leu Trp Ala Asp |     |     |     |
| 85  | 90  | 95  |     |
| Trp Ala Leu Ser Ala Thr Leu Leu Ala Leu His Gly Leu Glu Ala Val |     |     |     |
| 100   | 105 | 110 |     |
| Leu Gln Val Val Ala Ile Ala Ala Phe Thr Ser His Thr Ser Pro Phe |     |     |     |
| 115   | 120 | 125 |     |
| Arg Gly Phe Gly Gly Glu Val Arg Ala Lys Ala Gly Asp Glu Thr Ala |     |     |     |
| 130   | 135 | 140 |     |
| Gly Glu Arg Ala Ala Glu Gly His Ile Arg Ser Leu Arg Pro Leu Gln |     |     |     |
| 145   | 150 | 155 | 160 |
| Phe Tyr Gln Leu Leu Pro Phe Ala Arg Ser Ala Lys Gln Ile Leu Ala |     |     |     |
| 165   | 170 | 175 |     |
| Leu Cys Phe Phe Pro Ile Pro Arg Phe Thr Ile Ser Ser Pro         |     |     |     |
| 180   | 185 | 190 |     |

&lt;210&gt; 4179

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4179

|   |    |    |    |
|---|----|----|----|
| Met Asn Leu Ala Cys Gly Glu Asp Val Ser Thr Asn Gly Gln Leu Gly |    |    |    |
| 1   | 5  | 10 | 15 |
| Pro Lys Glu Asp Thr Gly Ser Asn Thr Glu Thr Asn Gln Ile Leu Pro |    |    |    |
| 20  | 25 | 30 |    |
| Arg Pro Ser Cys Tyr Gln Thr Thr Leu Val Gln Gly Trp Leu Leu Cys |    |    |    |
| 35  | 40 | 45 |    |
| Thr Gly Gln Ser His Pro Ile Pro Thr Gln Ala Leu Cys Pro Ala Thr |    |    |    |



|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Leu Ala Ser Ser Trp Pro Ser His Gln Ala Lys Gln Gly Arg Gly Met |     |     |
| 65  | 70  | 75  |
| Gly Met Pro Thr His Pro Tyr Gln Leu Cys Arg His Arg Thr Met His |     |     |
| 85  | 90  | 95  |
| Ser Ser Trp Glu Glu Ser Asp Glu Leu Leu Lys Ala Gln Glu Gly Pro |     |     |
| 100   | 105 | 110 |
| Ala Gln Trp Ser Ala Trp Gln Gly Gln Cys Phe Ser Gln Gly Arg Asp |     |     |
| 115   | 120 | 125 |
| Gly Gly Arg Leu Thr Arg Asp Pro Gln Gly Gly Arg Cys Ile Ser Val |     |     |
| 130   | 135 | 140 |
| Leu Phe Pro Asp Asn Lys Asp Val Ser Val Met Met Ser Glu Met Asp |     |     |
| 145   | 150 | 155 |
| Val Asn Val Ile Ala Gly Thr Leu Lys Leu Tyr Phe Arg Glu Leu Pro |     |     |
| 165   | 170 | 175 |
| Glu Pro Leu Phe Thr Asp Glu Phe Tyr Pro Asn Phe Ala Glu Gly Ile |     |     |
| 180   | 185 | 190 |
| Gly Glu His Trp Arg Pro Trp Pro His Gly Arg Arg Leu Leu His Val |     |     |
| 195   | 200 | 205 |
| His Cys Cys Pro Trp Arg Leu                                     |     |     |
| 210   | 215 |     |

&lt;210&gt; 4180

&lt;211&gt; 783

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4180

|   |
|---|
| Met Leu Ser Asp Leu Thr Leu Gln Leu Arg Gln Arg Gln Glu Asn Thr |
| 1 5 10 15   |
| Ile Ile Glu Asn Pro Asp Val Pro Gln Asp Phe Gly Asn Gln Gly Ser |
| 20 25 30  |
| Thr Val Glu Ser Leu Cys Asp Asp Val Val Ser Val Leu Thr Val Leu |
| 35 40 45  |

Cys Glu Lys Leu Gln Ala Ala Ile Asn Asp Ser Gln Gln Leu Gln Leu  
 50 55 60  
 Leu Tyr Leu Glu Cys Ile Leu Ser Val Leu Ser Ser Ser Ser Ser Ser  
 65 70 75 80  
 Met His Leu His Arg Arg Phe Thr Asp Leu Ile Trp Lys Asn Leu Cys  
 85 90 95  
 Pro Ala Leu Ile Val Ile Leu Gly Asn Pro Ile His Asp Lys Thr Ile  
 100 105 110  
 Thr Ser Ala His Thr Ser Ser Thr Ser Thr Ser Leu Glu Ser Asp Ser  
 115 120 125  
 Ala Ser Pro Gly Val Ser Asp His Gly Arg Gly Ser Gly Cys Ser Cys  
 130 135 140  
 Thr Ala Pro Ala Leu Ser Gly Pro Val Ala Arg Thr Ile Tyr Tyr Ile  
 145 150 155 160  
 Ala Ala Glu Leu Val Arg Leu Val Gly Ser Val Asp Ser Met Lys Pro  
 165 170 175  
 Val Leu Gln Ser Leu Tyr His Arg Val Leu Leu Tyr Pro Pro Pro Gln  
 180 185 190  
 His Arg Val Glu Ala Ile Lys Ile Met Lys Glu Ile Leu Gly Ser Pro  
 195 200 205  
 Gln Arg Leu Cys Asp Leu Ala Gly Pro Ser Ser Thr Glu Ser Glu Ser  
 210 215 220  
 Arg Lys Arg Ser Ile Ser Lys Arg Lys Ser His Leu Asp Leu Leu Lys  
 225 230 235 240  
 Leu Ile Met Asp Gly Met Thr Glu Ala Cys Ile Lys Gly Gly Ile Glu  
 245 250 255  
 Ala Cys Tyr Ala Ala Val Ser Cys Val Cys Thr Leu Leu Gly Ala Leu  
 260 265 270  
 Asp Glu Leu Ser Gln Gly Lys Gly Leu Ser Glu Gly Gln Val Gln Leu  
 275 280 285  
 Leu Leu Leu Arg Leu Glu Glu Leu Lys Asp Gly Ala Glu Trp Ser Arg  
 290 295 300  
 Asp Ser Met Glu Ile Asn Glu Ala Asp Phe Arg Trp Gln Arg Arg Val  
 305 310 315 320  
 Leu Ser Ser Glu His Thr Pro Trp Glu Ser Gly Asn Glu Arg Ser Leu  
 325 330 335

Asp Ile Ser Ile Ser Val Thr Thr Asp Thr Gly Gln Thr Thr Leu Glu  
 340 345 350  
 Gly Glu Leu Gly Gln Thr Thr Pro Glu Asp His Ser Gly Asn His Lys  
 355 360 365  
 Asn Ser Leu Lys Ser Pro Ala Ile Pro Glu Gly Lys Glu Thr Leu Ser  
 370 375 380  
 Lys Val Leu Glu Thr Glu Ala Val Asp Gln Pro Asp Val Val Gln Arg  
 385 390 395 400  
 Ser His Thr Val Pro Tyr Pro Asp Ile Thr Asn Phe Leu Ser Val Asp  
 405 410 415  
 Cys Arg Thr Arg Ser Tyr Gly Ser Arg Tyr Ser Glu Ser Asn Phe Ser  
 420 425 430  
 Val Asp Asp Gln Asp Leu Ser Arg Thr Glu Phe Asp Ser Cys Asp Gln  
 435 440 445  
 Tyr Ser Met Ala Ala Glu Lys Asp Ser Gly Arg Ser Asp Val Ser Asp  
 450 455 460  
 Ile Gly Ser Asp Asn Cys Ser Leu Ala Asp Glu Glu Gln Thr Pro Arg  
 465 470 475 480  
 Asp Cys Leu Gly His Arg Ser Leu Arg Thr Ala Ala Leu Ser Leu Lys  
 485 490 495  
 Leu Leu Lys Asn Gln Glu Ala Asp Gln His Ser Ala Arg Leu Phe Ile  
 500 505 510  
 Gln Ser Leu Glu Gly Leu Leu Pro Arg Leu Leu Ser Leu Ser Asn Val  
 515 520 525  
 Glu Glu Val Asp Thr Ala Leu Gln Asn Phe Ala Ser Thr Phe Cys Ser  
 530 535 540  
 Gly Met Met His Ser Pro Gly Phe Asp Gly Asn Ser Ser Leu Ser Phe  
 545 550 555 560  
 Gln Met Leu Met Asn Ala Asp Ser Leu Tyr Thr Ala Ala His Cys Ala  
 565 570 575  
 Leu Leu Leu Asn Leu Lys Leu Ser His Gly Asp Tyr Tyr Arg Lys Arg  
 580 585 590  
 Pro Thr Leu Ala Pro Gly Val Met Lys Asp Phe Met Lys Gln Val Gln  
 595 600 605  
 Thr Ser Gly Val Leu Met Val Phe Ser Gln Ala Trp Ile Glu Glu Leu  
 610 615 620

Tyr His Gln Val Leu Asp Arg Asn Met Leu Gly Glu Ala Gly Tyr Trp  
 625                      630                      635                      640  
 Gly Ser Pro Glu Asp Asn Ser Leu Pro Leu Ile Thr Met Leu Thr Asp  
                          645                      650                      655  
 Ile Asp Gly Leu Glu Ser Ser Ala Ile Gly Gly Gln Leu Met Ala Ser  
                          660                      665                      670  
 Ala Ala Thr Glu Ser Pro Phe Ala Gln Ser Arg Arg Ile Asp Asp Ser  
                          675                      680                      685  
 Thr Val Ala Gly Val Ala Phe Ala Arg Tyr Ile Leu Val Gly Cys Trp  
                          690                      695                      700  
 Lys Asn Leu Ile Asp Thr Leu Ser Thr Pro Leu Thr Gly Arg Met Ala  
 705                      710                      715                      720  
 Gly Ser Ser Lys Glu Leu Ala Phe Ile Leu Gly Ala Glu Gly Ile Lys  
                          725                      730                      735  
 Glu Gln Asn Gln Lys Glu Arg Asp Ala Ile Cys Met Ser Leu Asp Gly  
                          740                      745                      750  
 Leu Arg Lys Ala Ala Arg Leu Ser Cys Ala Leu Gly Val Ala Ala Asn  
                          755                      760                      765  
 Cys Ala Ser Ala Leu Ala Gln Met Ala Ala Ala Ser Cys Val Gln  
                          770                      775                      780

<210> 4181

<211> 115

<212> PRT

<213> Homo sapiens

<400> 4181

Met Thr Asp Arg Asp Ala Gln Trp Arg Pro Leu Ser Arg Pro Leu Gly  
   1                      5                      10                      15  
 Thr Arg Pro His Ala Pro Leu Ala Pro Ala Cys Val Arg Arg Pro Trp  
                          20                      25                      30  
 Ala Gly Lys Ala Pro Gly Ser Val Ser Ser Val Ser Ser Gln Leu Pro  
                          35                      40                      45  
 Ala Leu Gln Pro Pro Arg Leu Leu Val Ile Phe Cys Phe Lys Val Ala  
                          50                      55                      60

Phe Cys Val Phe Phe Ser His Phe Ser Ser Ser Ser Ser Ser Cys His  
 65 70 75 80  
 Ile Tyr Phe Pro Pro Asn Thr Cys Pro Leu Asn Ser Ile Asp Ala Ile  
 85 90 95  
 Leu Ser Leu Lys Lys Cys Tyr Ser His Thr Asp Ser Val Trp Ser Leu  
 100 105 110  
 Gln Leu Asp  
 115

<210> 4182

<211> 497

<212> PRT

<213> Homo sapiens

<400> 4182

Met Glu Ser Gly Leu Ser Trp Val Phe Leu Val Ala Leu Leu Arg Gly  
 1 5 10 15  
 Val Gln Cys Gln Phe Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln  
 20 25 30  
 Ser Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Tyr Gly Phe Met Leu  
 35 40 45  
 Arg Thr Asn Leu Met Tyr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu  
 50 55 60  
 Glu Trp Leu Ala Val Ser Ser Tyr Asp Gly His Thr Asp His Tyr Ala  
 65 70 75 80  
 Asp Ser Val Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Met Asn  
 85 90 95  
 Arg Leu Tyr Leu Gln Met Arg Asn Leu Arg Pro Asp Asp Thr Ala Met  
 100 105 110  
 Tyr His Cys Ala Arg Val Gly Tyr Asp Asp Asn Thr Val Arg Asp Leu  
 115 120 125  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser  
 130 135 140  
 Ala Ser Pro Thr Ser Pro Lys Val Phe Pro Leu Ser Leu Cys Ser Thr  
 145 150 155 160

|   |     |     |     |
|---|-----|-----|-----|
| Gln Pro Asp Gly Asn Val Val Ile Ala Cys Leu Val Gln Gly Phe Phe |     |     |     |
| 165   | 170 | 175 |     |
| Pro Gln Glu Pro Leu Ser Val Thr Trp Ser Glu Ser Gly Gln Gly Val |     |     |     |
| 180   | 185 | 190 |     |
| Thr Ala Arg Asn Phe Pro Pro Ser Gln Asp Ala Ser Gly Asp Leu Tyr |     |     |     |
| 195   | 200 | 205 |     |
| Thr Thr Ser Ser Gln Leu Thr Leu Pro Ala Thr Gln Cys Leu Ala Gly |     |     |     |
| 210   | 215 | 220 |     |
| Lys Ser Val Thr Cys His Val Lys His Tyr Thr Asn Pro Ser Gln Asp |     |     |     |
| 225   | 230 | 235 | 240 |
| Val Thr Val Pro Cys Pro Val Pro Ser Thr Pro Pro Thr Pro Ser Pro |     |     |     |
| 245   | 250 | 255 |     |
| Ser Thr Pro Pro Thr Pro Ser Pro Ser Cys Cys His Pro Arg Leu Ser |     |     |     |
| 260   | 265 | 270 |     |
| Leu His Arg Pro Ala Leu Glu Asp Leu Leu Leu Gly Ser Glu Ala Asn |     |     |     |
| 275   | 280 | 285 |     |
| Leu Thr Cys Thr Leu Thr Gly Leu Arg Asp Ala Ser Gly Val Thr Phe |     |     |     |
| 290   | 295 | 300 |     |
| Thr Trp Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly Pro Pro Asp |     |     |     |
| 305   | 310 | 315 | 320 |
| Arg Asp Leu Cys Gly Cys Tyr Ser Val Ser Ser Val Leu Pro Gly Cys |     |     |     |
| 325   | 330 | 335 |     |
| Ala Glu Pro Trp Asn His Gly Lys Thr Phe Thr Cys Thr Ala Ala Tyr |     |     |     |
| 340   | 345 | 350 |     |
| Pro Glu Ser Lys Thr Pro Leu Thr Ala Thr Leu Ser Lys Ser Gly Asn |     |     |     |
| 355   | 360 | 365 |     |
| Thr Phe Arg Pro Glu Val His Leu Leu Pro Pro Pro Ser Glu Glu Leu |     |     |     |
| 370   | 375 | 380 |     |
| Ala Leu Asn Glu Leu Val Thr Leu Thr Cys Leu Ala Arg Gly Phe Ser |     |     |     |
| 385   | 390 | 395 | 400 |
| Pro Lys Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln Glu Leu Pro |     |     |     |
| 405   | 410 | 415 |     |
| Arg Glu Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro Ser Gln Gly |     |     |     |
| 420   | 425 | 430 |     |
| Thr Thr Thr Phe Ala Val Thr Ser Ile Leu Arg Val Ala Ala Glu Asp |     |     |     |
| 435   | 440 | 445 |     |

Trp Lys Lys Gly Asp Thr Phe Ser Cys Met Val Gly His Glu Ala Leu  
 450 455 460  
 Pro Leu Ala Phe Thr Gln Lys Thr Ile Asp Arg Leu Ala Gly Lys Pro  
 465 470 475 480  
 Thr His Val Asn Val Ser Val Val Met Ala Glu Val Asp Gly Thr Cys  
 485 490 495  
 Tyr

<210> 4183

<211> 568

<212> PRT

<213> Homo sapiens

<400> 4183

Met Glu His Leu Trp Phe Phe Leu Leu Leu Leu Val Ala Pro Pro Arg  
 1 5 10 15  
 Arg Val Leu Ser Gln Val Arg Leu Lys Glu Trp Gly Ala Lys Thr Trp  
 20 25 30  
 Lys Pro Ser Glu Thr Leu Ser Leu Val Cys Arg Val Asp Gly Gly Pro  
 35 40 45  
 Phe Asn Leu Tyr Ser Trp Ser Trp Ile Arg Gln Gly Ser Gly Lys Gly  
 50 55 60  
 Leu Glu Trp Leu Gly Glu Ile Thr Pro Gly Gly Pro Thr His Ser Asn  
 65 70 75 80  
 Pro Ser Leu Ala Ser Arg Val Val Leu Ser Val Asp Thr Ser Lys Asn  
 85 90 95  
 His Val Ser Leu Lys Leu Leu Ser Leu Thr Val Ala Asp Thr Ala Val  
 100 105 110  
 Tyr Phe Cys Ala Ala Arg Asn Pro Ser Ala Gly Ala Ala Glu Tyr Trp  
 115 120 125  
 Gly Pro Gly Ser Pro Val Ile Val Ser Ser Ala Pro Thr Lys Ala Pro  
 130 135 140  
 Asp Val Phe Pro Ile Ile Ser Gly Cys Arg His Pro Lys Asp Asn Ser  
 145 150 155 160

Pro Val Val Leu Ala Cys Leu Ile Thr Gly Tyr His Pro Thr Ser Val  
 165 170 175  
 Thr Val Thr Trp Tyr Met Gly Thr Gln Ser Gln Pro Gln Arg Thr Phe  
 180 185 190  
 Pro Glu Ile Gln Arg Arg Asp Ser Tyr Tyr Met Thr Ser Ser Gln Leu  
 195 200 205  
 Ser Thr Pro Leu Gln Gln Trp Arg Gln Gly Glu Tyr Lys Cys Val Val  
 210 215 220  
 Gln His Thr Ala Ser Lys Ser Lys Lys Glu Ile Phe Arg Trp Pro Glu  
 225 230 235 240  
 Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr Ala Gln Pro Gln Ala  
 245 250 255  
 Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro Ala Thr Thr Arg Asn  
 260 265 270  
 Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys Glu Lys Glu Lys Glu Glu  
 275 280 285  
 Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro Ser His Thr Gln  
 290 295 300  
 Pro Leu Gly Val Tyr Leu Leu Thr Pro Ala Val Gln Asp Leu Trp Leu  
 305 310 315 320  
 Arg Asp Lys Ala Thr Phe Thr Cys Phe Val Val Gly Ser Asp Leu Lys  
 325 330 335  
 Asp Ala His Leu Thr Trp Glu Val Ala Gly Lys Val Pro Thr Gly Gly  
 340 345 350  
 Val Glu Glu Gly Leu Leu Glu Arg His Ser Asn Gly Ser Gln Ser Gln  
 355 360 365  
 His Ser Arg Leu Thr Leu Pro Arg Ser Leu Trp Asn Ala Gly Thr Ser  
 370 375 380  
 Val Thr Cys Thr Leu Asn His Pro Ser Leu Pro Pro Gln Arg Leu Met  
 385 390 395 400  
 Ala Leu Arg Glu Pro Ala Ala Gln Ala Pro Val Lys Leu Ser Leu Asn  
 405 410 415  
 Leu Leu Ala Ser Ser Asp Pro Pro Glu Ala Ala Ser Trp Leu Leu Cys  
 420 425 430  
 Glu Val Ser Gly Phe Ser Pro Pro Asn Ile Leu Leu Met Trp Leu Glu  
 435 440 445



Asp Gln Arg Glu Val Asn Thr Ser Gly Phe Ala Pro Ala Arg Pro Pro  
 450 455 460  
 Pro Gln Pro Gly Ser Thr Thr Phe Trp Ala Trp Ser Val Leu Arg Val  
 465 470 475 480  
 Pro Ala Pro Pro Ser Pro Gln Pro Ala Thr Tyr Thr Cys Val Val Ser  
 485 490 495  
 His Glu Asp Ser Arg Thr Leu Leu Asn Ala Ser Arg Ser Leu Glu Val  
 500 505 510  
 Ser Tyr Leu Ala Met Thr Pro Leu Ile Pro Gln Ser Lys Asp Glu Asn  
 515 520 525  
 Ser Asp Asp Tyr Ser Thr Phe Asp Asp Val Gly Ser Leu Trp Thr Thr  
 530 535 540  
 Leu Ser Thr Phe Val Ala Leu Phe Ile Leu Thr Leu Leu Tyr Ser Gly  
 545 550 555 560  
 Ile Val Thr Phe Ile Lys Val Lys  
 565

<210> 4184

<211> 478

<212> PRT

<213> Homo sapiens

<400> 4184

Met Asp Trp Thr Trp Thr Ile Leu Phe Leu Val Ala Gly Ala Thr Gly  
 1 5 10 15  
 Val Lys Ser Gln Ala Gln Leu Leu Gln Ser Gly Pro Glu Ala Glu Arg  
 20 25 30  
 Pro Gly Ala Ser Val Arg Val Ser Cys Arg Ala Ser Gly Tyr Asp Phe  
 35 40 45  
 Arg Thr Phe Ala Val Thr Trp Val Arg Gln Ala Pro Gly Gln Gly Leu  
 50 55 60  
 Glu Trp Met Gly Trp Val Asn Thr Asp Gln Gly Asp Thr His Tyr Ala  
 65 70 75 80  
 Arg Arg Phe Gln Gly Arg Val Ser Met Thr Thr Asp Thr Ser Thr Ser  
 85 90 95

Thr Ala Tyr Leu Glu Leu Arg Arg Leu Thr Phe Asp Asp Thr Ala Val  
 100 105 110  
 Tyr Phe Cys Ala Arg Leu Leu Leu Pro Asn Gly Arg Asn Trp Ala Gln  
 115 120 125  
 Trp Lys Asn Tyr Tyr Ala Phe Asp Val Trp Gly His Gly Thr Thr Val  
 130 135 140  
 Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala  
 145 150 155 160  
  
 Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu  
 165 170 175  
 Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly  
 180 185 190  
 Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser  
 195 200 205  
 Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu  
 210 215 220  
 Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr  
 225 230 235 240  
 Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr  
 245 250 255  
 Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe  
 260 265 270  
 Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro  
 275 280 285  
 Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val  
 290 295 300  
 Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr  
 305 310 315 320  
 Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val  
 325 330 335  
 Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys  
 340 345 350  
 Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser  
 355 360 365  
 Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro

|   |                         |     |     |
|---|-------------------------|-----|-----|
| 370   | 375                     | 380 |     |
| Ser Arg Asp Glu Leu Thr Lys Asn Gln Val         | Ser Leu Thr Cys Leu Val |     |     |
| 385   | 390                     | 395 | 400 |
| Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val         | Glu Trp Glu Ser Asn Gly |     |     |
|   | 405                     | 410 | 415 |
| Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro     | Val Leu Asp Ser Asp     |     |     |
|   | 420                     | 425 | 430 |
| Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val     | Asp Lys Ser Arg Trp     |     |     |
|   | 435                     | 440 | 445 |
| Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His | Glu Ala Leu His         |     |     |
|   | 450                     | 455 | 460 |
| Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro | Gly Lys                 |     |     |
| 465   | 470                     | 475 |     |

&lt;210&gt; 4185

&lt;211&gt; 548

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4185

|   |     |     |     |
|---|-----|-----|-----|
| Met Ser Ala Gly Asp Ala Val Cys Thr Gly Trp Leu Val Lys Ser Pro |     |     |     |
| 1   | 5   | 10  | 15  |
| Pro Glu Arg Lys Leu Gln Arg Tyr Ala Trp Arg Lys Arg Trp Phe Val |     |     |     |
|   | 20  | 25  | 30  |
| Leu Arg Arg Gly Arg Met Ser Gly Asn Pro Asp Val Leu Glu Tyr Tyr |     |     |     |
|   | 35  | 40  | 45  |
| Arg Asn Lys His Ser Ser Lys Pro Ile Arg Val Ile Asp Leu Ser Glu |     |     |     |
|   | 50  | 55  | 60  |
| Cys Ala Val Trp Lys His Val Gly Pro Ser Phe Val Arg Lys Glu Phe |     |     |     |
| 65  | 70  | 75  | 80  |
| Gln Asn Asn Phe Val Phe Ile Val Lys Thr Thr Ser Arg Thr Phe Tyr |     |     |     |
|   | 85  | 90  | 95  |
| Leu Val Ala Lys Thr Glu Gln Glu Met Gln Val Trp Val His Ser Ile |     |     |     |
|   | 100 | 105 | 110 |
| Ser Gln Val Cys Asn Leu Gly His Leu Glu Asp Gly Ala Ala Asp Ser |     |     |     |

|   |     |     |
|---|-----|-----|
| 115   | 120 | 125 |
| Met Glu Ser Leu Ser Tyr Thr Pro Ser Ser Leu Gln Pro Ser Ser Ala |     |     |
| 130   | 135 | 140 |
| Ser Ser Leu Leu Thr Ala His Ala Ala Ser Ser Ser Leu Pro Arg Asp |     |     |
| 145   | 150 | 155 |
| Asp Pro Asn Thr Asn Ala Val Ala Thr Glu Glu Thr Arg Ser Glu Ser |     |     |
| 165   | 170 | 175 |
| Glu Leu Leu Phe Leu Pro Asp Tyr Leu Val Leu Ser Asn Cys Glu Thr |     |     |
| 180   | 185 | 190 |
| Gly Arg Leu His His Thr Ser Leu Pro Thr Arg Cys Asp Ser Trp Ser |     |     |
| 195   | 200 | 205 |
| Asn Ser Asp Arg Ser Leu Glu Gln Ala Ser Phe Asp Asp Val Phe Val |     |     |
| 210   | 215 | 220 |
| Asp Cys Leu Gln Pro Leu Pro Ser Ser His Leu Val His Pro Ser Cys |     |     |
| 225   | 230 | 235 |
| His Gly Ser Gly Ala Gln Glu Val Pro Ser Ser Arg Pro Gln Ala Ala |     |     |
| 245   | 250 | 255 |
| Leu Ile Trp Ser Arg Glu Ile Asn Gly Pro Pro Arg Asp His Leu Ser |     |     |
| 260   | 265 | 270 |
| Ser Ser Pro Leu Leu Glu Ser Ser Leu Ser Ser Thr Ile Gln Val Asp |     |     |
| 275   | 280 | 285 |
| Lys Asn Gln Gly Ser Leu Pro Cys Gly Ala Lys Glu Leu Asp Ile Met |     |     |
| 290   | 295 | 300 |
| Ser Asn Thr Pro Pro Pro Arg Pro Pro Lys Pro Ser His Leu Ser Glu |     |     |
| 305   | 310 | 315 |
| Arg Arg Gln Glu Glu Trp Ser Thr His Ser Gly Ser Lys Lys Pro Glu |     |     |
| 325   | 330 | 335 |
| Cys Thr Leu Val Pro Arg Arg Ile Ser Leu Ser Gly Leu Asp Asn Met |     |     |
| 340   | 345 | 350 |
| Arg Thr Trp Lys Ala Asp Val Glu Gly Gln Ser Leu Arg His Arg Asp |     |     |
| 355   | 360 | 365 |
| Lys Arg Leu Ser Leu Asn Leu Pro Cys Arg Phe Ser Pro Met Tyr Pro |     |     |
| 370   | 375 | 380 |
| Thr Ala Ser Ala Ser Ile Glu Asp Ser Tyr Val Pro Met Ser Pro Gln |     |     |
| 385   | 390 | 395 |
| Ala Gly Ala Ser Gly Leu Gly Pro His Cys Ser Pro Asp Asp Tyr Ile |     |     |

405                      410                      415  
 Pro Met Asn Ser Gly Ser Ile Ser Ser Pro Leu Pro Glu Leu Pro Ala  
 420                      425                      430  
 Asn Leu Glu Pro Pro Pro Val Asn Arg Asp Leu Lys Pro Gln Arg Lys  
 435                      440                      445  
 Ser Arg Pro Pro Pro Leu Asp Leu Arg Asn Leu Ser Ile Ile Arg Glu  
 450                      455                      460  
 His Ala Ser Leu Thr Arg Thr Arg Thr Val Pro Cys Ser Arg Thr Ser  
 465                      470                      475                      480  
 Phe Leu Ser Pro Glu Arg Asn Gly Ile Asn Ser Ala Arg Phe Phe Ala  
 485                      490                      495  
 Asn Pro Val Ser Arg Glu Asp Glu Glu Ser Tyr Ile Glu Met Lys Leu  
 500                      505                      510  
 Leu Leu Ser Glu Glu Gln Arg Val Asp Tyr Val Gln Val Asp Glu Gln  
 515                      520                      525  
 Lys Thr Gln Ala Leu Gln Ser Thr Lys Gln Glu Trp Thr Asp Glu Arg  
 530                      535                      540  
 Gln Ser Lys Val  
 545

<210> 4186

<211> 304

<212> PRT

<213> Homo sapiens

<400> 4186

Met Asn Ile Val Phe Ser Arg Asp Ser Gln Val Arg Val Met Glu Asn  
 1                      5                      10                      15  
 Thr Val Ala Asn Thr Glu Lys Tyr Phe Gly Gln Phe Cys Ser Leu Leu  
 20                      25                      30  
 Ala Ala Tyr Thr Arg Lys Thr Ala Arg Leu Arg Asp Lys Ala Asp Gln  
 35                      40                      45  
 Leu Val Lys Gln Leu Ile Asp Phe Ala Asn Ser Glu Asn Pro Glu Leu  
 50                      55                      60

Arg Ala Thr Met Arg Gly Phe Ala Glu Asp Leu Ala Lys Val Gln Asp  
 65 70 75 80  
 Tyr Arg Gln Ala Gln Val Glu Arg Leu Glu Thr Lys Val Val Asn Pro  
 85 90 95  
 Leu Lys Leu Tyr Gly Ala Gln Ile Lys Gln Thr Arg Ala Glu Ile Lys  
 100 105 110  
 Lys Phe Lys His Val Gln Asn His Glu Ile Lys Gln Leu Glu Lys Leu  
 115 120 125  
 Glu Lys Leu Arg Gln Lys Ser Pro Ser Asp Gln Gln Met Ile Ser Gln  
 130 135 140  
 Ala Glu Thr Arg Val Gln Arg Ala Ala Val Asp Ser Ser Arg Thr Thr  
 145 150 155 160  
 Leu Gln Leu Glu Glu Thr Val Asp Gly Phe Gln Arg Gln Lys Leu Lys  
 165 170 175  
 Asp Leu Gln Lys Phe Phe Cys Asp Phe Val Thr Ile Glu Met Val Phe  
 180 185 190  
 His Ala Lys Ala Val Glu Val Tyr Ser Ser Ala Phe Gln Thr Leu Glu  
 195 200 205  
 Lys Tyr Asp Leu Glu Arg Asp Leu Leu Asp Phe Arg Ala Lys Met Gln  
 210 215 220  
 Gly Val Tyr Gly His Tyr Asp Thr Arg Leu Leu Ala Asn Thr Ser Pro  
 225 230 235 240  
 Pro Pro Ser Val Leu Gln Ser Leu Ala Ser Gln Gly Thr Leu Gln Val  
 245 250 255  
 Gln Leu Ser Arg Ala Asn Glu Asp Pro Glu His Pro His Ala Asn His  
 260 265 270  
 Gly Arg Phe Ser Leu Cys Glu Trp Val Val Lys Gly Gln Pro Ala His  
 275 280 285  
 Cys Val Cys Gly Gln Gly Gly His Leu Met Leu Pro Gly His Ser Leu  
 290 295 300

<210> 4187

<211> 156

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4187

Met Asn Ala Ala Ser Pro Leu Gly Ala Trp Val Arg Val Trp Arg His

1 5 10 15

Gln Ser Trp Pro Val Cys Asp Ser Pro Gly Ser Ser Thr Ser Ser Leu

20 25 30

Ala Pro Gly Pro Glu Pro Gly Pro Gln Pro Ala Leu His Val Gln Ala

35 40 45

Gln Val Asn Asn Ser Asn Asn Lys Lys Gly Thr Phe Thr Asp Asp Leu

50 55 60

His Lys Leu Val Asp Glu Trp Thr Ser Lys Thr Val Gly Ala Ala Gln

65 70 75 80

Leu Lys Pro Thr Leu Asn Gln Leu Lys Gln Thr Gln Lys Leu Gln Asp

85 90 95

Met Glu Ala Gln Ala Gly Trp Ala Ala Pro Gly Glu Ala Arg Ala Met

100 105 110

Thr Ala Pro Arg Ala Gly Val Gly Met Pro Arg Leu Pro Pro Ala Pro

115 120 125

Gly Pro Leu Ser Thr Thr Val Ile Pro Gly Ala Ala Pro Thr Leu Ser

130 135 140

Val Pro Thr Pro Asp Pro Glu Ser Glu Lys Pro Asp

145 150 155

&lt;210&gt; 4188

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4188

Met Pro Lys Glu Leu Glu Ser Gly Ser His Glu Ser Pro Asp Asp Ser

1 5 10 15

Ser Ser Thr Ala Gln Thr Leu Glu Leu Leu Cys His Leu Asp Asn Thr

20 25 30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | His | Gly | Asn | Met | Ala | Cys | Val | Val | Trp | Glu | Pro | Met | Gly | Asp | Gly |
| 35  |     |     |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Lys | Lys | Ile | Ile | Ser | Leu | Ala | Asp | Asn | His | Ile | Leu | Leu | Trp | Asp | Leu |
| 50  |     |     |     |     |     | 55  |     |     |     |     |     | 60  |     |     |     |
| Gln | Glu | Ser | Ser | Ser | Gln | Ala | Val | Leu | Ala | Ser | Ser | Ala | Ser | Leu | Glu |
| 65  |     |     |     |     |     | 70  |     |     |     |     |     | 75  |     |     |     |
| Gly | Lys | Gly | Gln | Leu | Lys | Phe | Thr | Ser | Gly | Arg | Trp | Ser | Pro | His | His |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     |     |     |
| Asn | Cys | Thr | Gln | Val | Ala | Thr | Ala | Asn | Asp | Thr | Thr | Leu | Arg | Gly | Trp |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     |     |
| Asp | Thr | Arg | Ser | Met | Arg | Ser | Thr | Ala |     |     |     |     |     |     |     |
| 115 |     |     |     |     |     | 120 |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 4189

<211> 230

&lt;212&gt; PRT

⟨213⟩ Homo sapiens

<400> 4189

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Phe | Val | Lys | Ser | Gly | Trp | Leu | Leu | Arg | Gln | Ser | Thr | Ile | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Lys | Arg | Trp | Lys | Lys | Asn | Trp | Phe | Asp | Leu | Trp | Ser | Asp | Gly | His | Leu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ile | Tyr | Tyr | Asp | Asp | Gln | Thr | Arg | Gln | Asn | Ile | Glu | Asp | Lys | Val | His |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |
| Met | Pro | Met | Asp | Cys | Ile | Asn | Ile | Arg | Thr | Gly | Gln | Glu | Cys | Arg | Asp |
|     | 50  |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Thr | Gln | Pro | Pro | Asp | Gly | Lys | Ser | Lys | Asp | Cys | Met | Leu | Gln | Ile | Val |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Cys | Arg | Asp | Gly | Lys | Thr | Ile | Ser | Leu | Cys | Ala | Glu | Ser | Thr | Asp | Asp |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Cys | Leu | Ala | Trp | Lys | Phe | Thr | Leu | Gln | Asp | Ser | Arg | Thr | Asn | Thr | Ala |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Tyr | Val | Gly | Ser | Ala | Val | Met | Thr | Asp | Glu | Thr | Ser | Val | Val | Ser | Ser |
|     |     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |



Pro Pro Pro Tyr Thr Ala Tyr Ala Ala Pro Ala Pro Glu Val Gly Arg  
 130 135 140  
 Thr Leu Ser Leu Gln Gln Ala Tyr Gly Tyr Gly Pro Tyr Gly Gly Ala  
 145 150 155 160  
 Tyr Pro Pro Gly Thr Gln Val Val Tyr Ala Ala Asn Gly Gln Ala Tyr  
 165 170 175  
 Ala Val Pro Tyr Gln Tyr Pro Tyr Ala Gly Leu Tyr Gly Gln Gln Pro  
 180 185 190  
 Ala Asn Gln Val Ile Ile Arg Glu Arg Tyr Arg Asp Asn Gly Ser Asp  
 195 200 205  
 Leu Ala Leu Gly Met Leu Ala Gly Ala Ala Thr Gly Met Ala Leu Gly  
 210 215 220  
 Ser Leu Phe Trp Val Phe  
 225 230

<210> 4190

<211> 120

<212> PRT

<213> Homo sapiens

<400> 4190

Met Lys Ser Ala Val Ile Thr Pro Cys Ser His Phe Phe His Ala Gly  
 1 5 10 15  
 Cys Leu Lys Lys Trp Leu Tyr Val Gln Glu Thr Cys Pro Leu Cys His  
 20 25 30  
 Cys His Leu Lys Asn Ser Ser Gln Leu Pro Gly Leu Gly Thr Glu Pro  
 35 40 45  
 Val Leu Gln Pro His Ala Gly Ala Glu Gln Asn Val Met Phe Gln Glu  
 50 55 60  
 Gly Thr Glu Pro Pro Gly Gln Glu His Thr Pro Gly Thr Arg Ile Gln  
 65 70 75 80  
 Glu Gly Ser Arg Asp Asn Asn Glu Tyr Ile Ala Arg Arg Pro Asp Asn  
 85 90 95  
 Gln Glu Gly Ala Phe Asp Pro Lys Glu Tyr Pro His Ser Ala Lys Asp  
 100 105 110

Glu Ala His Pro Val Glu Ser Ala

115

120

<210> 4191

<211> 163

<212> PRT

<213> Homo sapiens

<400> 4191

Met Arg Val Pro Pro Ala Gly Thr Trp Ala Leu Arg Pro Ile Trp Thr

1

5

10

15

Glu Met Gly Thr Pro Leu Arg Gly Ser Gln Ala Pro Gly Arg Ile Val

20

25

30

Leu Leu Leu Leu Val Ile Thr Pro Gln Trp Arg Trp Ile Pro Ser Lys

35

40

45

Thr Pro Asn Val Ala Pro Arg Ser Asn Gln Arg Cys Asn Pro Gly Gly

50

55

60

Tyr Leu Ser Gly Gly Val Ser Leu Cys Ala Ser His Ser Gln Pro Ala

65

70

75

80

Ala Leu Pro Asn Leu Gly Arg Leu Gln Lys Lys Leu Leu Gln Thr Arg

85

90

95

Cys Lys Gly Arg Arg Met Cys Pro Lys Ala Gly Asp Gln Thr Gly Gly

100

105

110

Ala Phe Cys Met Cys Asp Val Ser Gly Gly Gly Gly Glu Cys Val Ser

115

120

125

Gly Ser Gly Gly Gly Gly Glu Ser Gly Arg Lys Thr Gly Thr Thr Ser

130

135

140

Ala Met Lys Asp Pro Arg Val Leu Lys Cys Lys Leu Arg Val Thr Asn

145

150

155

160

Asp Leu His

<210> 4192

<211> 109

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4192

```

Met Gly Phe His His Phe Gly Gln Ala Gly Leu Gln Leu Val Thr Ser
  1             5             10             15
Gly Asp Leu Ser Ala Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Val
          20             25             30
Ser His Cys Thr Gln Pro Trp Trp Val Phe Cys Arg Glu Gln Phe Gln
          35             40             45
Lys Asp Phe Trp Trp Gln Pro Leu Ser Leu Trp Leu Thr Asp Met Gly
          50             55             60
Lys Ile Ile Gln Lys Thr Tyr Leu Arg Gln Asp Val Glu Asn Ser Thr
          65             70             75             80
Val Ile Ser Leu Tyr Leu Asn Thr Thr Ser Asn Asn Val Tyr Asp Arg
          85             90             95
Val Asp His Phe His Glu Gly Ile Thr Ser Leu Ala Val
          100             105

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&lt;210&gt; 4193

&lt;211&gt; 976

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4193

```

Met Asn Thr Gln Lys Gly Ser Leu Thr Ile Asn Val His Arg Gly Ser
  1             5             10             15
Leu Ala Met Ser Ile Gln Arg Gly Ser Leu Val Pro Arg Asp Met Asp
          20             25             30
Ser Ser Gly Arg Asp Met Gln Leu Arg Val Ile Pro Ala Glu Val Lys
          35             40             45
Phe Leu Asp Thr Met Ala Gly Arg Val Tyr Arg Leu Pro Ile Thr Val
          50             55             60
His Asn Ile Cys Arg Trp Asn Gln Lys Ile Arg Phe Lys Glu Pro Val
          65             70             75             80

```

Lys Pro Gln Phe Lys Leu Met Leu Thr Ser Leu Asp Lys Glu Leu Ala  
                     85                    90                    95  
 Ser Gly Leu Gln Met Thr Ala Met Val Glu Tyr His Pro Asp Lys Asp  
                     100                    105                    110  
 Glu Asp Thr Phe Asp Arg Leu Leu Ile Ser Ile Glu Asn Lys Thr Thr  
                     115                    120                    125  
 Glu Ile Pro Leu Ile Gly Leu Ile Pro Ser Cys Gln Leu Glu Ile Glu  
                     130                    135                    140  
 Ser Val Val Asn Phe Gly Thr Leu Val Ala Asn Ser Lys Val Tyr Ser  
 145                    150                    155                    160  
 Lys Glu Ile Thr Ile Thr Asn His Gly Lys Ala Pro Gly Ile Phe Lys  
                     165                    170                    175  
 Ala Glu Tyr His Gly Gln Leu Pro Ile Leu Ile Phe Pro Thr Ser Gly  
                     180                    185                    190  
 Ile Val Asp Ala Lys Ser Ser Met Val Ile Lys Val Asp Phe Cys Ala  
                     195                    200                    205  
 Asp Gln Pro Arg Ile Val Asp Glu Glu Ala Ile Val Ile Leu Gln Gly  
                     210                    215                    220  
 Gln Pro Glu Met Leu Leu Ser Ile Lys Ala His Met Val Glu Gln Ile  
 225                    230                    235                    240  
 Ile Glu Leu Leu Ser Met Ser Ser Asp Arg Arg Leu Glu Cys Ile His  
                     245                    250                    255  
 Phe Gly Pro Val Phe Phe Gly Ser Ser Lys Ile Lys His Ala Arg Val  
                     260                    265                    270  
 Tyr Asn Asn Ser Pro Glu Pro Ile Asn Trp Val Ala Ile Ile Gln Asp  
                     275                    280                    285  
 Asp Ala Val Gly Glu Glu Leu Gly Thr Asp Ile Gln Gln Arg Thr Asp  
                     290                    295                    300  
 Ile Ala Leu Asn Asn Leu Thr Tyr Ile Arg Lys Ile Lys Asn Ile Asp  
 305                    310                    315                    320  
 Thr Thr Ile Ile Ile Ser Cys Leu Pro Asn Glu Gly Thr Leu Gln Pro  
                     325                    330                    335  
 Tyr Gln Lys Thr Val Ile Thr Phe Cys Phe Thr Pro Lys Leu Met Ala  
                     340                    345                    350  
 Val Gly Lys Lys Asp Ile Gly Pro Ser Tyr Arg Gln Asp Tyr Ala Leu  
                     355                    360                    365

Phe Leu Arg Phe Glu Ser Val Gly Ser Lys Asp Gly Phe Leu Arg Asp  
 370 375 380  
 Asp Asp Tyr Lys Thr Ile Lys Ser Glu Arg Phe Gln Lys Val Glu Leu  
 385 390 395 400  
 Ala Leu Thr Gly Thr Gly Leu Pro Val Leu Leu Gln Phe Asp Pro Gly  
 405 410 415  
 Pro Val Leu Asn Phe Lys Pro Cys Phe Met Gly Glu Arg Ser Glu Ile  
 420 425 430  
 Gln Cys Ile Ile Lys Asn Gln Cys Glu Leu Leu Pro Val Thr Tyr His  
 435 440 445  
 Phe Lys Lys Thr Ala Asn Phe Glu Ile Asp Pro Glu Lys Gly Lys Ile  
 450 455 460  
 Thr Gly Gly Gly Met Val Asp Val Met Cys Ser Phe Val Pro His Gln  
 465 470 475 480  
 Leu Gly Val Phe Lys Val Lys Gln Met Ile Glu Ile Ile Gly Leu Val  
 485 490 495  
 Ala Glu Glu Asp Leu Gln Ser Leu Ser Val Lys Ser Phe His His Val  
 500 505 510  
 Tyr Leu Ala Phe Asn Ser Ile Cys Lys Thr Ser Thr Lys Lys Val Val  
 515 520 525  
 Met Lys Phe Asp Pro Gly Ile Leu Pro Ser Ile Arg Asn Pro Thr Gly  
 530 535 540  
 Lys Phe Val Val Lys Asp Leu Ala Lys Arg Lys Asn Tyr Ala Pro Val  
 545 550 555 560  
  
 Ala Met Leu Gln Ser Ala Met Thr Arg Thr His Asn His Arg Ser Cys  
 565 570 575  
 Glu Glu Pro Val Lys Asp Met Leu Leu Ala Phe Pro Asn Asp Arg Ala  
 580 585 590  
 Ala Thr Ile Arg Ser Lys Asp His His Lys His Phe Arg Pro Ile Phe  
 595 600 605  
 Thr Lys Val Pro Arg Phe Asn Tyr Val Asn His Asp Phe Ala Tyr Thr  
 610 615 620  
 Thr Phe Glu Lys Gln Gln Lys Lys Leu His Glu Asn Tyr Tyr Ala Met  
 625 630 635 640  
 Tyr Leu Lys Tyr Leu Arg Ser Val Arg Leu Gln Lys Lys Gln Ala Glu

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 645 |     | 650 |     | 655 |     |     |     |     |     |     |     |     |     |     |
| Arg | Glu | Arg | Met | Tyr | Ser | Tyr | Asp | Asp | Thr | Asp | Ile | Gly | Leu | Glu | Pro |
|     | 660 |     | 665 |     | 670 |     |     |     |     |     |     |     |     |     |     |
| Gly | Ser | Gly | Leu | Lys | Ser | Pro | Ser | Leu | Ser | Glu | Ala | Glu | Ile | Glu | Glu |
|     | 675 |     | 680 |     | 685 |     |     |     |     |     |     |     |     |     |     |
| Glu | Leu | Ser | Ser | Ala | Ala | Asn | Ser | Ile | Arg | Ala | Asn | Arg | Leu | Leu | Thr |
|     | 690 |     | 695 |     | 700 |     |     |     |     |     |     |     |     |     |     |
| Thr | Arg | Gly | Ile | Ala | Ser | Gln | Glu | Glu | Glu | Ser | Val | Arg | Arg | Lys | Val |
| 705 |     |     | 710 |     | 715 |     |     |     |     |     |     |     |     |     |     |
| Leu | Lys | Gly | Leu | Lys | Ser | Glu | Pro | Ser | Thr | Pro | Gln | Glu | Lys | His | Asp |
|     | 725 |     | 730 |     | 735 |     |     |     |     |     |     |     |     |     |     |
| Cys | Ser | Leu | Met | Leu | Thr | Pro | Lys | Gln | Ile | His | Gln | Val | Ile | Val | Gly |
|     | 740 |     | 745 |     | 750 |     |     |     |     |     |     |     |     |     |     |
| Pro | Ser | Val | Leu | Asn | Phe | Gly | Asn | Ile | Cys | Val | Asn | Ser | Pro | Asn | Thr |
|     | 755 |     | 760 |     | 765 |     |     |     |     |     |     |     |     |     |     |
| His | Leu | Leu | His | Val | Ile | Asn | Met | Leu | Pro | Met | His | Val | Leu | Leu | Gln |
|     | 770 |     | 775 |     | 780 |     |     |     |     |     |     |     |     |     |     |
| Leu | Asp | Thr | Asp | Leu | Glu | Glu | Leu | Gln | Lys | Thr | Asn | Gln | Phe | Ser | Tyr |
| 785 |     |     | 790 |     | 795 |     |     |     |     |     |     |     |     |     |     |
| Val | Ile | Leu | Pro | Thr | Ser | Ser | Thr | Tyr | Ile | Ser | Met | Val | Phe | Asp | Ser |
|     | 805 |     | 810 |     | 815 |     |     |     |     |     |     |     |     |     |     |
| Pro | Thr | Ile | Gly | Lys | Phe | Trp | Lys | Ser | Phe | Thr | Phe | Thr | Val | Asn | Asn |
|     | 820 |     | 825 |     | 830 |     |     |     |     |     |     |     |     |     |     |
| Val | Pro | Ser | Gly | His | Ile | Leu | Val | Val | Ala | Val | Val | Gln | Pro | Val | Thr |
|     | 835 |     | 840 |     | 845 |     |     |     |     |     |     |     |     |     |     |
| Leu | Glu | Leu | Ser | Ser | Asn | Glu | Leu | Val | Leu | Arg | Pro | Arg | Gly | Phe | Phe |
|     | 850 |     | 855 |     | 860 |     |     |     |     |     |     |     |     |     |     |
| Met | Lys | Thr | Cys | Phe | Arg | Gly | Thr | Val | Arg | Leu | Tyr | Asn | Arg | Gln | Asn |
| 865 |     |     | 870 |     | 875 |     |     |     |     |     |     |     |     |     |     |
| Cys | Cys | Ala | Gln | Phe | Gln | Trp | Gln | Pro | Val | Asn | Thr | Gly | Arg | Gly | Ile |
|     | 885 |     | 890 |     | 895 |     |     |     |     |     |     |     |     |     |     |
| Ala | Phe | Ser | Ile | Cys | Pro | Ser | Lys | Gly | Thr | Val | Glu | Ala | Tyr | Ser | Ser |
|     | 900 |     | 905 |     | 910 |     |     |     |     |     |     |     |     |     |     |
| Leu | Glu | Cys | Glu | Val | Thr | Trp | Gln | Gln | Gly | Phe | Ser | Ser | Pro | Glu | Glu |
|     | 915 |     | 920 |     | 925 |     |     |     |     |     |     |     |     |     |     |
| Gly | Glu | Phe | Ile | Leu | His | Val | Phe | Gln | Gly | Asn | Ala | Leu | Lys | Leu | Lys |

|   |     |     |     |
|---|-----|-----|-----|
| 930   | 935 | 940 |     |
| Cys Val Ala His Val Ile Ile Phe Leu Glu His Gly Phe Cys Phe Glu |     |     |     |
| 945   | 950 | 955 | 960 |
| Gly Tyr Glu Leu Val Gly Tyr Thr Leu Val Tyr Ile Val Thr Tyr Ile |     |     |     |
| 965   | 970 | 975 |     |

&lt;210&gt; 4194

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4194

|   |     |     |    |
|---|-----|-----|----|
| Met Ser Thr His His Gln Asn Pro Ala Asn Gly Pro Pro Leu Pro Pro |     |     |    |
| 1   | 5   | 10  | 15 |
| Ser Pro Asp Ala Glu Met Val Met Gly Ser Trp Arg Val Gly Ser Glu |     |     |    |
| 20  | 25  | 30  |    |
| Met Lys Gly Thr Pro Gln Trp Ala Ala Gly Pro Ile Phe Pro Lys Pro |     |     |    |
| 35  | 40  | 45  |    |
| Cys His Tyr Leu Cys Glu Gly Gly Gln Val Ala Glu Gly Ser Gly Cys |     |     |    |
| 50  | 55  | 60  |    |
| Arg Leu Leu Tyr Pro Leu Cys Leu Lys His Pro Pro His Arg Ala Leu |     |     |    |
| 65  | 70  | 75  | 80 |
| Val Phe Thr Arg Phe Val Leu Asp Ser Leu Asn Gly Asn Arg Ile Pro |     |     |    |
| 85  | 90  | 95  |    |
| Trp Leu Arg Ala Lys Thr Thr Thr Tyr Gln Cys Pro Cys Pro Phe Gln |     |     |    |
| 100   | 105 | 110 |    |
| Leu Thr Leu Ser Ser Leu Arg Ser Ser Leu Ser Leu Trp Lys Gly His |     |     |    |
| 115   | 120 | 125 |    |
| Pro Ser Gln Gly Arg Asn Ala Trp Ser                             |     |     |    |
| 130   | 135 |     |    |

&lt;210&gt; 4195

&lt;211&gt; 173

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4195

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Met Lys Ser Arg Phe Val Asp Ser Gly Glu Met Ser Glu Ser Phe Pro
 1             5             10             15
Tyr Arg Thr Lys Ala Leu Phe Ala Phe Glu Glu Ile Asp Gly Val Asp
          20             25             30
Val Cys Phe Phe Gly Met His Val Gln Glu Tyr Gly Ser Asp Cys Pro
          35             40             45
Pro Pro Asn Thr Arg Tyr Val Thr Gly His Ile Trp Ala Cys Pro Pro
          50             55             60
Ser Glu Gly Asp Asp Tyr Ile Phe His Cys His Pro Pro Asp Gln Lys
          65             70             75             80
Ile Pro Lys Pro Lys Arg Leu Gln Glu Trp Tyr Lys Lys Met Leu Asp
          85             90             95
Lys Ala Phe Ala Glu Arg Ile Ile His Asp Tyr Lys Asp Ile Phe Lys
          100            105            110
Gln Ala Thr Glu Asp Arg Leu Thr Ser Ala Lys Glu Leu Pro Tyr Phe
          115            120            125
Glu Gly Asp Phe Trp Pro Asn Val Leu Glu Glu Ser Ile Lys Glu Leu
          130            135            140
Glu Gln Glu Glu Glu Glu Arg Lys Lys Glu Glu Ser Thr Ala Ala Ser
          145            150            155            160
Glu Thr Thr Glu Gly Ser Gln Gly Asp Ser Lys Asn Ala
          165            170

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<210> 4196

<211> 181

<212> PRT

<213> Homo sapiens

<400> 4196

```

Met Pro Leu Ala Leu Leu Gln Met Arg Pro Pro Lys Met Ser Pro Asp
 1             5             10             15
Val Thr Thr Cys Pro Leu Gly Gly Lys Ser Ala Pro Val Glu Ser Thr

```



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 20  |     |     |     | 25  |     |     |     | 30  |     |     |     |
| Gly | Ser | Phe | Leu | His | Ser | Pro | Asp | Leu | Ala | Ala | Cys | Thr | Gly | His | Phe |
| 35  |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |     |     |
| Ser | Glu | Val | Phe | Gln | Cys | Thr | Leu | Cys | Pro | Gly | Tyr | Leu | Gly | His | Ser |
| 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |     |
| Thr | Leu | Ala | Gln | Arg | Gly | Trp | Leu | Thr | Cys | Leu | Arg | Arg | Cys | Phe | Leu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |
| Gly | Asp | Ala | Val | Ala | Ser | Phe | Leu | Ser | Val | Leu | Val | Ile | Phe | Leu | Ser |
| 85  |     |     |     | 90  |     |     |     | 95  |     |     |     |     |     |     |     |
| Ser | Leu | Pro | Pro | Tyr | Ile | Pro | His | Asp | Arg | Cys | Val | Tyr | Val | His | Thr |
| 100 |     |     |     | 105 |     |     |     | 110 |     |     |     |     |     |     |     |
| Ser | Ala | Ser | Leu | His | Ser | Ala | Pro | Cys | Gln | Val | Ser | Cys | Gln | Ser | Val |
| 115 |     |     |     | 120 |     |     |     | 125 |     |     |     |     |     |     |     |
| Pro | Leu | Pro | Ser | Gly | Ser | Ala | Thr | Ser | Cys | Thr | Asp | Ser | Thr | Thr | Ala |
| 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |     |     |
| His | Thr | Cys | Val | Cys | Pro | Ala | Val | Asp | Pro | Pro | Pro | Lys | Ala | Ala | Ser |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |     |
| Ala | Asp | Ser | Arg | Glu | Pro | Ser | Thr | Leu | Lys | Ser | Gly | Gln | Ala | Gly | Ile |
| 165 |     |     |     | 170 |     |     |     | 175 |     |     |     |     |     |     |     |
| Ala | Thr | Cys | Leu | Ser |     |     |     |     |     |     |     |     |     |     |     |
| 180 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 4197

&lt;211&gt; 1358

&lt;212&gt; PRT

<213> Homo sapiens

&lt;400&gt; 4197

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gln | Asp | Ser | Lys | Gly | Arg | Leu | His | Ala | Leu | Thr | Ser | Val | Ser | Arg |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Glu | Gln | Ile | Val | Gly | Gly | Asp | Val | Gln | Gly | Tyr | Arg | Trp | Met | Phe | Glu |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Thr | Gln | Pro | Leu | Asp | Gln | Leu | Gly | Arg | Ser | Pro | Ser | Thr | Ile | Asp | Val |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Arg | Gly | Ile | Thr | Arg | Gln | Glu | Val | Val | Ala | Gly | Asp | Val | Gly | Thr |

|   |     |     |     |
|---|-----|-----|-----|
| 50  | 55  | 60  |     |
| Ala Arg Trp Leu Phe Glu Thr Gln Pro Leu Glu Met Ile His Gln Arg |     |     |     |
| 65  | 70  | 75  | 80  |
| Glu Gln Gln Glu Arg Gln Lys Glu Glu Gly Lys Ser Gln Gly Asp Pro |     |     |     |
|   | 85  | 90  | 95  |
| Gln Pro Glu Ala Pro Pro Lys Gly Asp Val Gln Thr Ile Arg Trp Leu |     |     |     |
|   | 100 | 105 | 110 |
| Phe Glu Thr Cys Pro Met Ser Glu Leu Ala Glu Lys Gln Gly Ser Glu |     |     |     |
|   | 115 | 120 | 125 |
| Val Thr Asp Pro Thr Ala Lys Ala Glu Ala Gln Ser Cys Thr Trp Met |     |     |     |
|   | 130 | 135 | 140 |
| Phe Lys Pro Gln Pro Val Asp Arg Pro Val Gly Ser Arg Glu Gln His |     |     |     |
| 145   | 150 | 155 | 160 |
| Leu Gln Val Ser Gln Val Pro Ala Gly Glu Arg Gln Thr Asp Arg His |     |     |     |
|   | 165 | 170 | 175 |
| Val Phe Glu Thr Glu Pro Leu Gln Ala Ser Gly Arg Pro Cys Gly Arg |     |     |     |
|   | 180 | 185 | 190 |
| Arg Pro Val Arg Tyr Cys Ser Arg Val Glu Ile Pro Ser Gly Gln Val |     |     |     |
|   | 195 | 200 | 205 |
| Ser Arg Gln Lys Glu Val Phe Gln Ala Leu Glu Ala Gly Lys Lys Glu |     |     |     |
|   | 210 | 215 | 220 |
| Glu Gln Glu Pro Arg Val Ile Ala Gly Ser Ile Pro Ala Gly Ser Val |     |     |     |
| 225   | 230 | 235 | 240 |
| His Lys Phe Thr Trp Leu Phe Glu Asn Cys Pro Met Gly Ser Leu Ala |     |     |     |
|   | 245 | 250 | 255 |
| Ala Glu Ser Ile Gln Gly Gly Asn Leu Leu Glu Glu Gln Pro Met Ser |     |     |     |
|   | 260 | 265 | 270 |
| Pro Ser Gly Asn Arg Met Gln Glu Ser Gln Glu Thr Ala Ala Glu Gly |     |     |     |
|   | 275 | 280 | 285 |
| Thr Leu Arg Thr Leu His Ala Thr Pro Gly Ile Leu His His Gly Gly |     |     |     |
|   | 290 | 295 | 300 |
| Ile Leu Met Glu Ala Arg Gly Pro Gly Glu Leu Cys Leu Ala Lys Tyr |     |     |     |
| 305   | 310 | 315 | 320 |
| Val Leu Ser Gly Thr Gly Gln Gly His Pro Tyr Ile Arg Lys Glu Glu |     |     |     |
|   | 325 | 330 | 335 |
| Leu Val Ser Gly Glu Leu Pro Arg Ile Ile Cys Gln Val Leu Arg Arg |     |     |     |

|   |     |     |
|---|-----|-----|
| 340   | 345 | 350 |
| Pro Asp Val Asp Gln Gln Gly Leu Leu Val Gln Glu Asp Pro Thr Gly |     |     |
| 355   | 360 | 365 |
| Gln Leu Gln Leu Lys Pro Leu Arg Leu Pro Thr Pro Gly Ser Ser Gly |     |     |
| 370   | 375 | 380 |
| Asn Ile Glu Asp Met Asp Pro Glu Leu Gln Gln Leu Leu Ala Cys Gly |     |     |
| 385   | 390 | 395 |
| Leu Gly Thr Ser Val Ala Arg Thr Gly Leu Val Met Gln Glu Thr Glu |     |     |
| 405   | 410 | 415 |
| Gln Gly Leu Val Ala Leu Thr Ala Tyr Ser Leu Gln Pro Arg Leu Thr |     |     |
| 420   | 425 | 430 |
| Ser Lys Ala Ser Glu Arg Ser Ser Val Gln Leu Leu Ala Ser Cys Ile |     |     |
| 435   | 440 | 445 |
| Asp Lys Gly Asp Leu Ser Gly Leu His Ser Leu Arg Trp Glu Pro Pro |     |     |
| 450   | 455 | 460 |
| Ala Asp Pro Ser Pro Val Pro Ala Ser Glu Gly Ala Gln Ser Leu His |     |     |
| 465   | 470 | 475 |
| Pro Thr Glu Ser Ile Ile His Val Pro Pro Leu Asp Pro Ser Met Gly |     |     |
| 485   | 490 | 495 |
| Met Gly His Leu Arg Ala Ser Gly Ala Thr Pro Cys Pro Pro Gln Ala |     |     |
| 500   | 505 | 510 |
| Ile Gly Lys Ala Val Pro Leu Ala Gly Glu Ala Ala Ala Pro Ala Gln |     |     |
| 515   | 520 | 525 |
| Leu Gln Asn Thr Glu Lys Gln Glu Asp Ser His Ser Gly Gln Lys Gly |     |     |
| 530   | 535 | 540 |
| Met Ala Val Leu Gly Lys Ser Glu Gly Ala Thr Thr Thr Pro Pro Gly |     |     |
| 545   | 550 | 555 |
| Pro Gly Ala Pro Asp Leu Leu Ala Ala Met Gln Ser Leu Arg Met Ala |     |     |
| 565   | 570 | 575 |
| Thr Ala Glu Ala Gln Ser Leu His Gln Gln Val Leu Asn Lys His Lys |     |     |
| 580   | 585 | 590 |
| Gln Gly Pro Thr Pro Thr Ala Thr Ser Asn Pro Ile Gln Asp Gly Leu |     |     |
| 595   | 600 | 605 |
| Arg Lys Ala Gly Ala Thr Gln Ser Asn Ile Arg Pro Gly Gly Gly Ser |     |     |
| 610   | 615 | 620 |
| Asp Pro Arg Ile Pro Ala Ala Pro Arg Lys Val Ser Arg Glu Glu Gln |     |     |

|   |   |     |     |
|---|---|-----|-----|
| 625   | 630   | 635 | 640 |
| Ala Leu Pro Arg Gly   | Leu Pro Gly Gly Trp Val Thr Ile Gln Asp Gly |     |     |
| 645   | 650   | 655 |     |
| Ile Tyr Thr Ala His Pro Val Arg Thr Phe Asp Pro Pro Gly Gly Val |   |     |     |
| 660   | 665   | 670 |     |
| Gln Leu Ser Gln Arg Glu Pro Gln Ser Arg His Arg Glu Thr Ala Leu |   |     |     |
| 675   | 680   | 685 |     |
| Ser Val Gln Ala Pro Arg Pro Leu Gln Gly Gly Pro Gly Gln Ser Thr |   |     |     |
| 690   | 695   | 700 |     |
| Gly Pro Gly Arg Glu Glu Pro Gly Gly Cys Thr Gln Met Ala Trp Gly |   |     |     |
| 705   | 710   | 715 | 720 |
| Pro Pro Gly Lys Ala Met Ala Glu Val Cys Pro Gly Gly Leu Gln Ala |   |     |     |
| 725   | 730   | 735 |     |
| Ala Glu Thr Thr Leu Lys Thr Ala Pro Leu Gly Arg His Ile Leu Ala |   |     |     |
| 740   | 745   | 750 |     |
| Ser Gly Pro Gln Ala Ala Gly Ala Ser Pro His Pro His Asn Ala Phe |   |     |     |
| 755   | 760   | 765 |     |
| Val Pro Pro Pro Pro Thr Leu Pro Ala Ala Val Thr Gly Pro Asp Phe |   |     |     |
| 770   | 775   | 780 |     |
| Pro Ala Gly Ala His Arg Ala Glu Asp Ser Ile Gln Gln Ala Ser Glu |   |     |     |
| 785   | 790   | 795 | 800 |
| Pro Leu Lys Asp Pro Leu Leu His Ser His Ser Ser Pro Ala Gly Gln |   |     |     |
| 805   | 810   | 815 |     |
| Arg Thr Pro Gly Gly Ser Gln Thr Lys Thr Pro Lys Leu Asp Pro Thr |   |     |     |
| 820   | 825   | 830 |     |
| Met Pro Pro Lys Lys Lys Pro Gln Leu Pro Pro Lys Pro Ala His Leu |   |     |     |
| 835   | 840   | 845 |     |
| Thr Gln Ser His Pro Pro Gln Arg Leu Pro Lys Pro Leu Pro Leu Ser |   |     |     |
| 850   | 855   | 860 |     |
| Pro Ser Phe Ser Ser Glu Val Gly Gln Arg Glu His Gln Arg Gly Glu |   |     |     |
| 865   | 870   | 875 | 880 |
| Arg Asp Thr Ala Ile Pro Gln Pro Ala Lys Val Pro Thr Thr Val Asp |   |     |     |
| 885   | 890   | 895 |     |
| Gln Gly His Ile Pro Leu Ala Arg Cys Pro Ser Gly His Ser Gln Pro |   |     |     |
| 900   | 905   | 910 |     |

|   |      |      |      |
|---|------|------|------|
| Ser Leu Gln His Gly Leu Ser Thr Thr Ala Pro Arg Pro Thr Lys Asn |      |      |      |
| 915   | 920  | 925  |      |
| Gln Ala Thr Gly Ser Asn Ala Gln Ser Ser Glu Pro Pro Lys Leu Asn |      |      |      |
| 930   | 935  | 940  |      |
| Ala Leu Asn His Asp Pro Thr Ser Pro Gln Trp Gly Pro Gly Pro Ser |      |      |      |
| 945   | 950  | 955  | 960  |
| Gly Glu Gln Pro Met Glu Gly Ser His Gln Gly Ala Pro Glu Ser Pro |      |      |      |
|   | 965  | 970  | 975  |
| Asp Ser Leu Gln Arg Asn Gln Lys Glu Leu Gln Gly Leu Leu Asn Gln |      |      |      |
|   | 980  | 985  | 990  |
| Val Gln Ala Leu Glu Lys Glu Ala Ala Ser Ser Val Asp Val Gln Ala |      |      |      |
|   | 995  | 1000 | 1005 |
| Leu Arg Arg Leu Phe Glu Ala Val Pro Gln Leu Gly Gly Ala Ala Pro |      |      |      |
| 1010  | 1015 | 1020 |      |
| Gln Ala Pro Ala Ala His Gln Lys Pro Glu Ala Ser Val Glu Gln Ala |      |      |      |
| 1025  | 1030 | 1035 | 1040 |
| Phe Gly Glu Leu Thr Arg Val Ser Thr Glu Val Ala Gln Leu Lys Glu |      |      |      |
|   | 1045 | 1050 | 1055 |
| Gln Thr Leu Ala Arg Leu Leu Asp Ile Glu Glu Ala Val His Lys Ala |      |      |      |
|   | 1060 | 1065 | 1070 |
| Leu Ser Ser Met Ser Ser Leu Gln Pro Glu Ala Ser Ala Arg Gly His |      |      |      |
|   | 1075 | 1080 | 1085 |
| Phe Gln Gly Pro Pro Lys Asp His Ser Ala His Lys Ile Ser Val Thr |      |      |      |
| 1090  | 1095 | 1100 |      |
| Val Ser Ser Ser Ala Arg Pro Ser Gly Ser Gly Gln Glu Val Gly Gly |      |      |      |
| 1105  | 1110 | 1115 | 1120 |
| Gln Thr Ala Val Lys Asn Gln Ala Lys Val Glu Cys His Thr Glu Ala |      |      |      |
|   | 1125 | 1130 | 1135 |
| Gln Ser Gln Val Lys Ile Arg Asn His Thr Glu Ala Arg Gly His Thr |      |      |      |
|   | 1140 | 1145 | 1150 |
| Ala Ser Thr Ala Pro Ser Thr Arg Arg Gln Glu Thr Ser Arg Glu Tyr |      |      |      |
|   | 1155 | 1160 | 1165 |
| Leu Cys Pro Pro Arg Val Leu Pro Ser Ser Arg Asp Ser Pro Ser Ser |      |      |      |
|   | 1170 | 1175 | 1180 |
| Pro Thr Phe Ile Ser Ile Gln Ser Ala Thr Arg Lys Pro Leu Glu Thr |      |      |      |
| 1185  | 1190 | 1195 | 1200 |

Pro Ser Phe Lys Gly Asn Pro Asp Val Ser Val Lys Ser Thr Gln Leu  
                   1205                  1210                  1215  
 Ala Gln Asp Ile Gly Gln Ala Leu Leu His Gln Lys Gly Val Gln Asp  
                   1220                  1225                  1230  
 Lys Thr Gly Lys Lys Asp Ile Thr Gln Cys Ser Val Gln Pro Glu Pro  
                   1235                  1240                  1245  
 Ala Pro Pro Ser Ala Ser Pro Leu Pro Arg Gly Trp Gln Lys Ser Val  
                   1250                  1255                  1260  
 Leu Glu Leu Gln Thr Gly Pro Gly Ser Ser Gln His Tyr Gly Ala Met  
 1265                  1270                  1275                  1280  
 Arg Thr Val Thr Glu Gln Tyr Glu Glu Val Asp Gln Phe Gly Asn Thr  
                   1285                  1290                  1295  
 Val Leu Met Ser Ser Thr Thr Val Thr Glu Gln Ala Glu Pro Pro Arg  
                   1300                  1305                  1310  
 Asn Pro Gly Ser His Leu Gly Leu His Ala Ser Pro Leu Leu Arg Gln  
                   1315                  1320                  1325  
 Phe Leu His Ser Pro Ala Gly Phe Ser Ser Asp Leu Thr Glu Ala Glu  
                   1330                  1335                  1340  
 Thr Val Gln Val Ser Cys Ser Tyr Ser Gln Pro Ala Ala Gln  
 1345                  1350                  1355

<210> 4198

<211> 331

<212> PRT

<213> Homo sapiens

<400> 4198

Met Ala Glu Gly Gly Gly Pro Glu Pro Gly Glu Gln Glu Arg Arg Ser  
   1                  5                  10                  15  
 Ser Gly Pro Arg Pro Pro Ser Ala Arg Asp Leu Gln Leu Ala Leu Ala  
                   20                  25                  30  
 Glu Leu Tyr Glu Asp Glu Val Lys Cys Lys Ser Ser Lys Ser Asn Arg  
                   35                  40                  45  
 Pro Lys Ala Thr Val Phe Lys Ser Pro Arg Thr Pro Pro Gln Arg Phe  
                   50                  55                  60

Tyr Ser Ser Glu His Glu Tyr Ser Gly Leu Asn Ile Val Arg Pro Ser  
 65 70 75 80  
 Thr Gly Lys Ile Val Asn Glu Leu Phe Lys Glu Ala Arg Glu His Gly  
 85 90 95  
 Ala Val Pro Leu Asn Glu Ala Thr Arg Ala Ser Gly Asp Asp Lys Ser  
 100 105 110  
 Lys Ser Phe Thr Gly Gly Gly Tyr Arg Leu Gly Ser Ser Phe Cys Lys  
 115 120 125  
 Arg Ser Glu Tyr Ile Tyr Gly Glu Asn Gln Leu Gln Asp Val Gln Ile  
 130 135 140  
 Leu Leu Lys Leu Trp Ser Asn Gly Phe Ser Leu Asp Asp Gly Glu Leu  
 145 150 155 160  
 Arg Pro Tyr Asn Glu Pro Thr Asn Ala Gln Phe Leu Glu Ser Val Lys  
 165 170 175  
 Arg Gly Glu Ile Pro Leu Glu Leu Gln Arg Leu Val His Gly Gly Gln  
 180 185 190  
 Val Asn Leu Asp Met Glu Asp His Gln Asp Gln Glu Tyr Ile Lys Pro  
 195 200 205  
 Arg Leu Arg Phe Lys Ala Phe Ser Gly Glu Gly Gln Lys Leu Gly Ser  
 210 215 220  
 Leu Thr Pro Glu Ile Val Ser Thr Pro Ser Ser Pro Glu Glu Glu Asp  
 225 230 235 240  
 Lys Ser Ile Leu Asn Ala Val Val Leu Ile Asp Asp Ser Val Pro Thr  
 245 250 255  
 Thr Lys Ile Gln Ile Arg Leu Ala Asp Gly Ser Arg Leu Ile Gln Arg  
 260 265 270  
 Phe Asn Ser Thr His Arg Ile Leu Asp Val Arg Asn Phe Ile Val Gln  
 275 280 285  
 Ser Arg Pro Glu Phe Ala Ala Leu Asp Phe Ile Leu Val Thr Ser Phe  
 290 295 300  
 Pro Asn Lys Glu Leu Thr Asp Glu Ser Leu Thr Leu Leu Glu Ala Asp  
 305 310 315 320  
 Ile Leu Asn Thr Val Leu Leu Gln Gln Leu Lys  
 325 330

&lt;210&gt; 4199

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4199

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Met Thr Phe Ser Leu Ala Arg Ile Lys Arg Gly Gly Cys Phe Leu Ala
  1             5             10             15
Gly Phe Arg Asn Leu Phe Lys Trp Phe His Cys Pro Phe Ile His Pro
      20             25             30
Ser Thr His Pro Thr Ile Gln Pro Ala Ile His Pro Leu Phe Ile Gln
      35             40             45
Gln Thr Phe Ser Cys Thr Arg Glu Leu Lys Gly Glu Gly Ser Gly Pro
      50             55             60
Trp Ala Pro Pro Ala Cys Arg Glu Thr Pro Leu Cys Gly Arg Arg Gly
      65             70             75             80
Gly Leu Cys Pro Leu Tyr Pro Pro Ser Val Pro Val Val Phe Arg Pro
      85             90             95
Val Thr Cys Leu Asn Leu Ser Val Cys Leu
      100             105

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&lt;210&gt; 4200

&lt;211&gt; 527

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4200

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Met Val Tyr Ile Val Arg Gln Phe Leu Leu Tyr Asn Val Ser Gly Ser
  1             5             10             15
Val Tyr Leu Asp Gln Leu Ile Val Leu Leu Thr Ala Lys Phe Ser Ile
      20             25             30
Leu Arg Ile Ala Gly Ser Arg Val His His Ser Pro Phe Ser Gly His
      35             40             45
Leu Asp Gly Cys Ser Phe Leu Ser Leu Gln His Ser Leu His Thr Ser

```



|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Leu Asp Met Ser Arg His Glu Asn Val Phe Leu Gly Leu Thr Leu Ser |     |     |
| 65  | 70  | 75  |
| Ser Lys Ser Ala Gly Leu Lys Gly Phe Gln Leu Ala Phe Val Pro Gly |     |     |
| 85  | 90  | 95  |
| Leu Leu Gln Gly Thr Gly Gly Tyr Leu Asp Gly Pro Leu Pro Thr Pro |     |     |
| 100   | 105 | 110 |
| Val Asp Asn Pro Arg Val Gly Leu Glu Val Gly Leu Arg Leu Ser Leu |     |     |
| 115   | 120 | 125 |
| Pro Pro Leu Pro Pro Cys Pro Gly Val His Ile Gln Ser Ser Gln Thr |     |     |
| 130   | 135 | 140 |
| Val Glu Ser Ser Gly Leu Tyr Thr Leu Gln Ser Ile Leu Lys Ala Gln |     |     |
| 145   | 150 | 155 |
| Leu Val Lys Glu Asp Lys Asp Ala Gln Phe Tyr Cys Glu Leu Asn Tyr |     |     |
| 165   | 170 | 175 |
| Arg Leu Pro Ser Gly Asn His Met Lys Glu Ser Arg Glu Val Thr Val |     |     |
| 180   | 185 | 190 |
| Pro Val Phe Tyr Pro Thr Glu Lys Val Trp Leu Glu Val Glu Pro Val |     |     |
| 195   | 200 | 205 |
| Gly Met Leu Lys Glu Gly Asp Arg Val Glu Ile Arg Cys Leu Ala Asp |     |     |
| 210   | 215 | 220 |
| Gly Asn Pro Pro Pro His Phe Ser Ile Ser Lys Gln Asn Pro Ser Thr |     |     |
| 225   | 230 | 235 |
| Arg Glu Ala Glu Glu Glu Thr Thr Asn Asp Asn Gly Val Leu Val Leu |     |     |
| 245   | 250 | 255 |
| Glu Pro Ala Arg Lys Glu His Ser Gly Arg Tyr Glu Cys Gln Gly Leu |     |     |
| 260   | 265 | 270 |
| Asp Leu Asp Thr Met Ile Ser Leu Leu Ser Glu Pro Gln Glu Leu Leu |     |     |
| 275   | 280 | 285 |
| Val Asn Tyr Val Ser Asp Val Arg Val Ser Pro Ala Ala Pro Glu Arg |     |     |
| 290   | 295 | 300 |
| Gln Glu Gly Ser Ser Leu Thr Leu Thr Cys Glu Ala Glu Ser Ser Gln |     |     |
| 305   | 310 | 315 |
| Asp Leu Glu Phe Gln Trp Leu Arg Glu Glu Thr Gly Gln Val Leu Glu |     |     |
| 325   | 330 | 335 |
| Arg Gly Pro Val Leu Gln Leu His Asp Leu Lys Arg Glu Ala Gly Gly |     |     |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 340 |     | 345 |     | 350 |
| Gly Tyr Arg Cys Val Ala Ser Val Pro Ser Ile Pro Gly Leu Asn Arg |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Thr Gln Leu Val Asn Val Ala Ile Phe Gly Pro Pro Trp Met Ala Phe |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Lys Glu Arg Lys Val Trp Val Lys Glu Asn Met Val Leu Asn Leu Ser |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Cys Glu Ala Ser Gly His Pro Arg Pro Thr Ile Ser Trp Asn Val Asn |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Gly Thr Ala Ser Glu Gln Asp Gln Asp Pro Gln Arg Val Leu Ser Thr |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |
| Leu Asn Val Leu Val Thr Pro Glu Leu Leu Glu Thr Gly Val Glu Cys |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |
| Thr Ala Ser Asn Asp Leu Gly Lys Asn Thr Ser Ile Leu Phe Leu Glu |     |     |     |     |     |
|   | 450 |     | 455 |     | 460 |
| Leu Val Asn Leu Thr Thr Leu Thr Pro Asp Ser Asn Thr Thr Thr Gly |     |     |     |     |     |
| 465   |     | 470 |     | 475 | 480 |
| Leu Ser Thr Ser Thr Ala Ser Pro His Thr Arg Ala Asn Ser Thr Ser |     |     |     |     |     |
|   | 485 |     | 490 |     | 495 |
| Thr Gly Lys Pro Gly Leu Ala Arg Glu Gln Gly Cys Ala Arg Ala Ser |     |     |     |     |     |
|   | 500 |     | 505 |     | 510 |
| Phe Leu Pro Cys Pro Ser Pro Glu Ser Pro Val Gln Lys Gly Glu     |     |     |     |     |     |
|   | 515 |     | 520 |     | 525 |

&lt;210&gt; 4201

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4201

|   |
|---|
| Met Thr Thr Pro Pro Thr Ser Leu Pro Glu Pro Phe Ser Gly Asp Pro |
| 1 5 10 15   |
| Gly Arg Leu Ala Gly Phe Leu Met Gln Met Asp Arg Phe Met Ile Phe |
| 20 25 30  |
| Gln Ala Ser Arg Phe Pro Gly Glu Ala Glu Arg Val Ala Phe Leu Val |

35                      40                      45  
 Ser Arg Leu Thr Gly Glu Ala Glu Lys Trp Ala Ile Pro His Met Gln  
 50                      55                      60  
 Pro Asp Ser Pro Leu Arg Asn Asn Tyr Gln Gly Phe Leu Ala Glu Leu  
 65                      70                      75                      80  
 Arg Arg Thr Tyr Lys Ser Pro Leu Arg His Ala Arg Arg Ala Gln Ile  
 85                      90                      95  
 Arg Lys Thr Ser Ala Ser Asn Arg Ala Val Arg Glu Arg Gln Met Leu  
 100                      105                      110  
 Cys Arg Gln Leu Ala Ser Ala Gly Thr Gly Pro Cys Pro Val His Pro  
 115                      120                      125  
 Ala Ser Asn Gly Thr Ser Pro Ala Pro Ala Leu Pro Ala Arg Ala Arg  
 130                      135                      140  
 Asn Leu  
 145

<210> 4202

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4202

Met Ile Pro Trp Arg Arg Arg Gly Val Leu Val Phe Gly Ile Phe Ser  
 1                      5                      10                      15  
 Leu Leu Val Leu Val Phe Pro His Leu Pro Gly Phe Ile Cys Leu Trp  
 20                      25                      30  
 Ser Leu Met Leu Val Thr Phe Gly Trp Gly Phe Cys Val Asp Ile Val  
 35                      40                      45  
 Phe Val Asp Val Asp Ala Ile Pro Phe Cys Phe Leu Val Phe Leu Leu  
 50                      55                      60  
 Thr Gly Arg Leu Leu Ser Cys Arg Pro Ala Gly Val Cys Trp Arg Ser  
 65                      70                      75                      80  
 Thr Pro Asp Pro Val Cys Leu Ser Ile Thr Ser Arg His Cys Arg Thr  
 85                      90                      95  
 Ala Lys Ile Ala Ala Cys Ser Phe Leu Trp Lys Phe Arg Pro Arg Gly

100 105 110  
 Ala Pro Ala Arg Cys  
 115

<210> 4203

<211> 369

<212> PRT

<213> Homo sapiens

<400> 4203

Met Ile Gln Gly Arg Leu Phe Asn Met Leu Ser Ala Val Arg Glu Met  
 1 5 10 15  
 Asp Lys Glu Ser Ile Leu Arg Lys Ile Gly Gln Ala Lys Gln Ser Ile  
 20 25 30  
 Ala Gln Glu Ala Asn Phe Phe Lys Phe Phe Leu Arg Arg Ile Ser Gln  
 35 40 45  
 Asp Asp Tyr Thr Ser Arg Phe Ser Val Ser Pro Lys Glu Val Leu Pro  
 50 55 60  
 Phe Ala Phe Pro Asp Cys Ser Pro Pro Gln Asp Ser Asn Glu Leu Ala  
 65 70 75 80  
 Pro Asp Gly Leu Gly Leu Val Pro Ile Lys Ser Ser Glu Val Gln Ile  
 85 90 95  
 Lys Gln Ser Tyr Ser Phe Phe Asn Leu Gln Val Pro Gln Leu Tyr Lys  
 100 105 110  
 Ile Lys Arg Tyr Gln Pro Phe Ser Val His Lys Ser Ser Thr Ser Tyr  
 115 120 125  
 Arg Pro Gln Lys Leu Ala Arg Ala Leu Lys Gln Gly Ala Glu Asp Glu  
 130 135 140  
 Val Thr Thr Ile Thr Ala Leu Pro Lys Gln Asp Ser Thr Thr Gln Leu  
 145 150 155 160  
 Ser Gly Lys Thr Ser Ile Leu Ser Met Lys Pro Pro Glu Ala Leu Ala  
 165 170 175  
 Met Ser Leu Asp Tyr Asp Pro Leu Tyr Val Phe Asn Pro Asn Pro Gly  
 180 185 190  
 Leu Phe Ala Val Met His Pro Leu Thr Tyr Ala Glu Thr Leu Ile Asp

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Tyr His Leu Cys Ser His Pro Lys Tyr Lys Phe Thr Lys Glu Ser Arg |     |     |
| 210   | 215 | 220 |
| His Gly Ser Ser Ile Pro Val Thr Gln Lys Gln Phe Leu His His Thr |     |     |
| 225   | 230 | 235 |
| Asp Ile Ile Pro Gly Ile Met His Trp Lys Ser Phe Gln Ser Leu Val |     |     |
| 245   | 250 | 255 |
| Leu Ser Ser Leu Pro Asp Pro Ser Lys Met Glu Thr Thr Lys Ser Cys |     |     |
| 260   | 265 | 270 |
| Asp Ser Phe Asn Ser Phe Met Leu Pro Ile Asp Val Pro Ala Ile Leu |     |     |
| 275   | 280 | 285 |
| Asp Ala Leu Pro Glu Glu Asp Arg Leu Glu Thr Val Glu Arg Glu Leu |     |     |
| 290   | 295 | 300 |
| Cys Glu Gln Asn Val Glu Val Met Leu Thr Pro Glu Met Ile Lys Val |     |     |
| 305   | 310 | 315 |
| Glu Phe Pro Met Leu Asn Tyr Lys Asp Ile Arg Lys Glu Lys Glu Val |     |     |
| 325   | 330 | 335 |
| Lys Asp Gln Ala Gln Pro Ala Glu Lys Ala Gly Glu Lys Leu Leu Glu |     |     |
| 340   | 345 | 350 |
| Glu Met Arg Asn Leu Arg Gly Lys Ala Leu Asn Thr Tyr Leu Ile Leu |     |     |
| 355   | 360 | 365 |
| Glu   |     |     |

&lt;210&gt; 4204

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4204

|   |
|---|
| Met Pro Lys Ile Ile Leu Cys Pro Asn His Lys Phe Ser Gly Leu Pro |
| 1 5 10 15   |
| Arg Asn His Leu Val Cys Ile Glu Cys Phe Ser Lys Cys Arg Asp Ala |
| 20 25 30  |
| Gln Val Val Gly Ile Gln Tyr Ile Glu Leu Ser Arg Cys Thr Phe Leu |

35                      40                      45  
 Glu Tyr Asn Leu Asn Gly His Phe Pro Thr Cys Ala Ile Pro Leu Phe  
 50                      55                      60  
 Ser Pro His Ser Ile His Ile Ser Gln Thr Thr Leu Ile Ile Val Phe  
 65                      70                      75                      80  
 Ile Ile Asp Leu Arg Lys Lys Lys Phe Glu Arg Val Glu Lys Thr Cys  
 85                      90                      95  
 Ile Leu Ser Pro Trp Ile Val Asn His  
 100                      105

<210> 4205

<211> 610

<212> PRT

<213> Homo sapiens

<400> 4205

Met Ala Glu Leu Ser Glu Pro Glu Gly Pro Val Asp Trp Lys Glu Arg  
 1                      5                      10                      15  
 Cys Val Ala Leu Glu Ser Gln Leu Met Lys Phe Arg Val Gln Ala Ser  
 20                      25                      30  
 Lys Ile Arg Glu Leu Leu Ala Glu Lys Met Gln Gln Leu Glu Arg Gln  
 35                      40                      45  
 Val Ile Asp Ala Glu Arg Gln Ala Glu Lys Ala Phe Gln Gln Val Gln  
 50                      55                      60  
 Val Met Glu Asp Lys Leu Lys Ala Ala Asn Ile Gln Thr Ser Glu Ser  
 65                      70                      75                      80  
 Glu Thr Arg Leu Tyr Asn Lys Cys Gln Asp Leu Glu Ser Leu Ile Gln  
 85                      90                      95  
 Glu Lys Asp Asp Val Ile Gln Asn Leu Glu Leu Gln Leu Glu Glu Gln  
 100                      105                      110  
 Lys Gln Ile Arg Ile Gln Glu Ala Lys Ile Ile Glu Glu Lys Ala Ala  
 115                      120                      125  
 Lys Ile Lys Glu Trp Val Thr Val Lys Leu Asn Glu Leu Glu Leu Glu  
 130                      135                      140  
 Asn Gln Asn Leu Arg Leu Ile Asn Gln Asn Gln Thr Glu Glu Ile Arg

|   |     |     |     |
|---|-----|-----|-----|
| 145   | 150 | 155 | 160 |
| Thr Met Gln Ser Lys Leu Gln Val Gln Gly Lys Lys Ser Ser Thr Val |     |     |     |
| 165   | 170 | 175 |     |
| Ser Thr Leu Lys Leu Ser Glu Gly Gln Arg Leu Ser Ser Leu Thr Phe |     |     |     |
| 180   | 185 | 190 |     |
| Gly Cys Phe Leu Ser Arg Ala Arg Ser Pro Pro Gln Val Val Lys Ser |     |     |     |
| 195   | 200 | 205 |     |
| Glu Glu Met Ser Lys Ile Ser Ser Lys Glu Pro Glu Phe Thr Glu Gly |     |     |     |
| 210   | 215 | 220 |     |
| Lys Asp Met Glu Glu Met Glu Ile Pro Glu Lys Ser Val Asp Asn Gln |     |     |     |
| 225   | 230 | 235 | 240 |
| Val Leu Glu Asn Asn Arg Gly Gln Arg Thr Leu His Gln Thr Pro Cys |     |     |     |
| 245   | 250 | 255 |     |
| Gly Ser Glu Gln Asn Arg Lys Thr Arg Thr Ser Phe Ala Thr Asp Gly |     |     |     |
| 260   | 265 | 270 |     |
| Gly Ile Ser Gln Asn Ser Gly Ala Pro Val Ser Asp Trp Ser Ser Asp |     |     |     |
| 275   | 280 | 285 |     |
| Glu Glu Asp Gly Ser Arg Gly Arg Ser Lys Ser Arg Cys Thr Ser Thr |     |     |     |
| 290   | 295 | 300 |     |
| Leu Ser Ser His Thr Ser Glu Glu Gly Val Gln Cys Ser Arg Met Gly |     |     |     |
| 305   | 310 | 315 | 320 |
| Ser Glu Met Tyr Leu Thr Ala Ser Asp Asp Ser Ser Ser Ile Phe Glu |     |     |     |
| 325   | 330 | 335 |     |
| Glu Glu Thr Phe Gly Ile Lys Arg Pro Glu His Lys Lys Leu Tyr Ser |     |     |     |
| 340   | 345 | 350 |     |
| Trp Gln Gln Glu Ala Gln Trp Lys Ala Leu Asn Ser Pro Leu Gly Lys |     |     |     |
| 355   | 360 | 365 |     |
| Gly Asn Ser Glu Leu Ser Lys Lys Glu Gln Asp Ser Ser Ser Asp Glu |     |     |     |
| 370   | 375 | 380 |     |
| Leu Asn Lys Lys Phe Gln Ser Gln Arg Leu Asp Tyr Ser Ser Ser Ser |     |     |     |
| 385   | 390 | 395 | 400 |
| Ser Glu Ala Asn Thr Pro Ser Pro Ile Leu Thr Pro Ala Leu Met Pro |     |     |     |
| 405   | 410 | 415 |     |
| Lys His Pro Asn Ser Leu Ser Gly Lys Gly Thr Gln Leu Val Pro Ser |     |     |     |
| 420   | 425 | 430 |     |
| Ser His Leu Pro Pro Pro Lys Leu Arg Ile Pro Asn Val Phe Ser Ile |     |     |     |

435                      440                      445  
 Ser Val Ala Leu Ala Lys Arg His Leu Ser Gln Pro Gln Leu Ser Ser  
 450                      455                      460  
 Asp Arg Met Phe Gly Thr Asn Arg Asn Ala Ile Ser Met Ile Arg Pro  
 465                      470                      475                      480  
 Leu Arg Pro Gln Glu Thr Asp Leu Asp Leu Val Asp Gly Asp Ser Thr  
 485                      490                      495  
 Glu Val Leu Glu Asn Met Asp Thr Ser Cys Asp Asp Gly Leu Phe Ser  
 500                      505                      510  
 Tyr Asp Ser Leu Asp Ser Pro Asn Ser Asp Asp Gln Glu His Cys Asp  
 515                      520                      525  
 Pro Ala Lys Lys Val Ala Tyr Ser Lys Pro Pro Thr Pro Pro Leu His  
 530                      535                      540  
 Arg Phe Pro Ser Trp Glu Ser Arg Ile Tyr Ala Val Ala Lys Ser Gly  
 545                      550                      555                      560  
 Ile Arg Met Ser Glu Ala Phe Asn Met Glu Ser Val Asn Lys Asn Ser  
 565                      570                      575  
 Ala Ala Thr Leu Ser Tyr Thr Thr Ser Gly Leu Tyr Thr Ser Leu Ile  
 580                      585                      590  
 Tyr Lys Asn Met Thr Thr Pro Val Tyr Thr Thr Leu Arg Gly Arg Arg  
 595                      600                      605  
 Pro Lys  
 610

<210> 4206

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4206

Met Gly Gly Leu Leu Thr Pro Gly Leu Trp Cys Cys Arg Gln Pro Ser  
 1                      5                      10                      15  
 Pro Val Tyr Thr Ala Thr Gln Pro Gln Ala Val Gly Ser Gln Trp Pro  
 20                      25                      30  
 Gly Gly Lys Gln Leu His Ser Pro Ala Leu Pro Gly Cys Pro Phe Gly



|   |     |    |
|---|-----|----|
| 35  | 40  | 45 |
| Phe Gln Pro Gly Ser Arg Pro Ala Ser Thr Gly Lys Pro Val Thr Glu |     |    |
| 50  | 55  | 60 |
| Ala Trp Thr Gln Arg Trp Thr Arg His Leu Leu Ala Thr Cys Asp Leu |     |    |
| 65  | 70  | 75 |
| Gly Arg Ser Glu Ser Val Ala Arg Ser Thr Cys Ser Ala Ala Ala Ile |     |    |
| 85  | 90  | 95 |
| Asn Ser Leu Pro Val Ser Lys Arg Arg                             |     |    |
| 100   | 105 |    |

&lt;210&gt; 4207

&lt;211&gt; 466

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4207

|   |     |     |
|---|-----|-----|
| Met Ala Leu Ala Gly Thr Gln Val Gly Pro Pro Pro Gln Glu Arg Ala |     |     |
| 1   | 5   | 10  |
| Pro Glu Pro Ile Gly Arg Ala Trp Gly Pro Pro Gly Ile Thr Gln Pro |     |     |
| 20  | 25  | 30  |
| Ser Ala Pro Gly Ala Thr Val Gly Arg Arg Val Ser Val Ala Ala Gly |     |     |
| 35  | 40  | 45  |
| Pro Trp Leu His Gly Pro His Gly Ser Cys Glu Trp Val Arg Leu Pro |     |     |
| 50  | 55  | 60  |
| Gly Ser Gly Asp Arg Gln Arg Thr Asp Pro Arg Leu Gly Ser Trp Arg |     |     |
| 65  | 70  | 75  |
| Glu Gly Arg Arg Gly Ala Gly Gln Pro Gly Ser Asp Thr Val Ser Ser |     |     |
| 85  | 90  | 95  |
| Ser Gly Arg Arg Arg Pro Ala Gly Ser Thr Gln Ala Gly Arg Gly Trp |     |     |
| 100   | 105 | 110 |
| Ala Ser Leu Glu Pro Ala Thr Ala Leu Val Gly Thr Trp Arg Arg Ala |     |     |
| 115   | 120 | 125 |
| His Val Ser Pro His Ala Ser His Arg Gly Ala Leu Ala Arg Arg Pro |     |     |
| 130   | 135 | 140 |
| Ala Arg Gly Ala Cys Ala Trp Asp Gly Ser Gln Asn Gln Arg Ala Pro |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 145   | 150 | 155 | 160 |
| Val Arg Leu Ala Ser Thr Val Gly Leu Trp Glu Ser Leu Leu Phe Ile |     |     |     |
| 165   | 170 | 175 |     |
| Phe Lys His Leu Gly Phe Ser Thr Gly Ser Trp Leu Leu Phe Pro Gln |     |     |     |
| 180   | 185 | 190 |     |
| Gly Met Ser Leu Arg Ser Arg Thr Arg Trp Gly Ser Gln Glu Ala Ala |     |     |     |
| 195   | 200 | 205 |     |
| Ala Gln Ser Leu His Ala Gly Lys Gly Ser His Leu Ser Gly Val Gly |     |     |     |
| 210   | 215 | 220 |     |
| Ser Leu Val Val Gln Gly Ser Ala Gly Gln Ser Leu Gly Cys Ala Ile |     |     |     |
| 225   | 230 | 235 | 240 |
| Thr Ala Thr Ala Phe Leu Leu Gly Ala Ser Thr Ser Ser Lys Thr Gly |     |     |     |
| 245   | 250 | 255 |     |
| Leu Val Pro Ala Pro Pro Ala Ala Ser Gly Gln Gly His Glu Gly Arg |     |     |     |
| 260   | 265 | 270 |     |
| Ala Leu Ser Thr Trp Ala Gly Gly Thr Leu Pro Gly Gly Thr Glu Gly |     |     |     |
| 275   | 280 | 285 |     |
| Ala Pro Thr Trp Ala Pro Ala Ser Cys Pro Ser Leu Leu Pro Pro Arg |     |     |     |
| 290   | 295 | 300 |     |
| Ala Arg Trp Gly Pro Gly Phe Glu Glu Pro Arg Thr Arg Ala Leu Pro |     |     |     |
| 305   | 310 | 315 | 320 |
| Ala Gly Ser Trp Arg Arg Ala Ser Gly Leu Gly Asn Arg Gly Arg Lys |     |     |     |
| 325   | 330 | 335 |     |
| Asn Ser Ser Arg Pro Gly Thr Lys Gly Ala Ser Gly Arg Thr His Gly |     |     |     |
| 340   | 345 | 350 |     |
| Trp Pro Arg Ala Arg Gly Val Thr Ala Gly Arg Pro Pro Gly Pro Gly |     |     |     |
| 355   | 360 | 365 |     |
| Pro Val Arg Gly Gln Tyr Gly Asp Pro Ala Cys Arg Trp Gln Ser Val |     |     |     |
| 370   | 375 | 380 |     |
| Leu Cys Val Trp Gly Pro Gln His Arg Leu Gly Gly Gly Trp Gly Arg |     |     |     |
| 385   | 390 | 395 | 400 |
| Gly Ser Arg Ser Gly Gln Gly Leu Gly Gly Ser Gly Thr Gly Arg Gly |     |     |     |
| 405   | 410 | 415 |     |
| Glu Gln Thr Gly Ser Ser Ser Gly His His Pro Gly Thr Ala Ala Pro |     |     |     |
| 420   | 425 | 430 |     |

Thr Arg Ala Ala Pro His Pro Trp Pro Arg Ser Pro Gly Thr Ala Gly  
           435                    440                    445  
 Pro Gly Val Ser Glu Gly Leu Ser Arg Ala Gly Thr Asp Gln Trp Ser  
           450                    455                    460  
 Pro Gly  
 465

<210> 4208

<211> 612

<212> PRT

<213> Homo sapiens

<400> 4208

Met Leu Leu Phe Arg Asp Cys Glu Glu Ala Thr Asp Phe Leu Thr Cys  
       1                    5                    10                    15  
 His Gly Leu Thr Val Ser Asp Gly Cys Val Glu Leu Asn Arg Ser Ala  
                     20                    25                    30  
 Phe Leu Glu Pro Glu Gly Leu Ser Lys Thr Arg Lys Ser Val Phe Ile  
                     35                    40                    45  
 Thr Arg Lys Leu Thr Val Ser Val Gly Glu Ile Val Asn Gly Gly Pro  
           50                    55                    60  
 Leu Pro Pro Val Pro Arg His Thr Pro Val Cys Ser Phe Asn Ser Gln  
       65                    70                    75                    80  
 Asn Lys Tyr Ile Gly Glu Ser Leu Ala Ala Glu Leu Pro Val Ser Thr  
                     85                    90                    95  
 Gln Arg Pro Gly Ser Asp Thr Val Gly Gly Gly Arg Gly Glu Glu Cys  
                     100                    105                    110  
 Gly Val Glu Pro Asp Ala Pro Leu Ser Ser Leu Pro Gln Ser Leu Pro  
           115                    120                    125  
 Ala Pro Ala Pro Ser Pro Val Pro Leu Pro Pro Val Leu Ala Leu Thr  
           130                    135                    140  
 Pro Ser Val Ala Pro Ser Leu Phe Gln Leu Ser Val Gln Pro Glu Pro  
       145                    150                    155                    160  
 Pro Pro Pro Glu Pro Val Pro Met Tyr Ser Asp Glu Asp Leu Ala Gln  
                     165                    170                    175

Val Val Asp Glu Leu Ile Gln Glu Ala Leu Gln Arg Asp Cys Glu Glu  
 180 185 190  
 Val Gly Ser Ala Gly Ala Ala Tyr Ala Ala Ala Ala Leu Gly Val Ser  
 195 200 205  
 Asn Ala Ala Met Glu Asp Leu Leu Thr Ala Ala Thr Thr Gly Ile Leu  
 210 215 220  
 Arg His Ile Ala Ala Glu Glu Val Ser Lys Glu Arg Glu Arg Arg Glu  
 225 230 235 240  
 Gln Glu Arg Gln Arg Ala Glu Glu Glu Arg Leu Lys Gln Glu Arg Glu  
 245 250 255  
 Leu Val Leu Ser Glu Leu Ser Gln Gly Leu Ala Val Glu Leu Met Glu  
 260 265 270  
 Arg Val Met Met Glu Phe Val Arg Glu Thr Cys Ser Gln Glu Leu Lys  
 275 280 285  
 Asn Ala Val Glu Thr Asp Gln Arg Val Arg Val Ala Arg Cys Cys Glu  
 290 295 300  
 Asp Val Cys Ala His Leu Val Asp Leu Phe Leu Val Glu Glu Ile Phe  
 305 310 315 320  
 Gln Thr Ala Lys Glu Thr Leu Gln Glu Leu Gln Cys Phe Cys Lys Tyr  
 325 330 335  
 Leu Gln Arg Trp Arg Glu Ala Val Thr Ala Arg Lys Lys Leu Arg Arg  
 340 345 350  
 Gln Met Arg Ala Phe Pro Ala Ala Pro Cys Cys Val Asp Val Ser Asp  
 355 360 365  
 Arg Leu Arg Ala Leu Ala Pro Ser Ala Glu Cys Pro Ile Ala Glu Glu  
 370 375 380  
 Asn Leu Ala Arg Gly Leu Leu Asp Leu Gly His Ala Gly Arg Leu Gly  
 385 390 395 400  
 Ile Ser Cys Thr Arg Leu Arg Arg Leu Arg Asn Lys Thr Ala His Gln  
 405 410 415  
 Met Lys Val Gln His Phe Tyr Gln Gln Leu Leu Ser Asp Val Ala Trp  
 420 425 430  
 Ala Ser Leu Asp Leu Pro Ser Leu Val Ala Glu His Leu Pro Gly Arg  
 435 440 445  
 Gln Glu His Val Phe Trp Lys Leu Val Leu Val Leu Pro Asp Val Glu

450                      455                      460  
 Glu Gln Ser Pro Glu Ser Cys Gly Arg Ile Leu Ala Asn Trp Leu Lys  
 465                      470                      475                      480  
 Val Lys Phe Met Gly Asp Glu Gly Ser Val Asp Asp Thr Ser Ser Asp  
                     485                      490                      495  
 Ala Gly Gly Ile Gln Thr Leu Ser Leu Phe Asn Ser Leu Ser Ser Lys  
                     500                      505                      510  
 Gly Asp Gln Met Ile Ser Val Asn Val Cys Ile Lys Val Ala His Gly  
                     515                      520                      525  
 Ala Leu Ser Asp Gly Ala Ile Asp Ala Val Glu Thr Gln Lys Asp Leu  
                     530                      535                      540  
 Leu Gly Ala Ser Gly Leu Met Leu Leu Leu Pro Pro Lys Met Lys Ser  
 545                      550                      555                      560  
 Glu Asp Met Ala Glu Glu Asp Val Tyr Trp Leu Ser Ala Leu Leu Gln  
                     565                      570                      575  
 Leu Lys Gln Leu Leu Gln Ala Lys Pro Phe Gln Pro Ala Leu Pro Leu  
                     580                      585                      590  
 Val Val Leu Val Pro Ser Pro Gly Gly Asp Ala Val Glu Lys Glu Val  
                     595                      600                      605  
 Glu Asp Gly Leu

610

&lt;210&gt; 4209

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4209

Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu  
   1                      5                      10                      15  
 Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val  
                     20                      25                      30  
 Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu  
                     35                      40                      45

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys  
 50 55 60  
 Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala  
 65 70 75 80  
 Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu  
 85 90 95  
 Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser  
 100 105 110  
 Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala  
 115 120 125  
 Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile  
 130 135 140  
 Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met  
 145 150 155 160  
 Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu  
 165 170 175  
 Gly Gly Gly Leu Leu Cys Cys Asn Cys Pro Pro Arg Thr Asp Lys Pro  
 180 185 190  
 Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr  
 195 200 205  
 Val

<210> 4210

<211> 211

<212> PRT

<213> Homo sapiens

<400> 4210

Met Ser Cys Thr Ile Glu Lys Ile Leu Thr Asp Ala Lys Thr Leu Leu  
 1 5 10 15  
 Glu Arg Leu Arg Glu His Asp Ala Ala Ala Glu Ser Leu Val Asp Gln  
 20 25 30  
 Ser Ala Ala Leu His Arg Arg Val Ala Ala Met Arg Glu Ala Gly Thr  
 35 40 45

Ala Leu Pro Asp Gln Val Arg Gln Arg Tyr Gln Glu Asp Ala Ser Asp  
 50 55 60  
 Met Lys Asp Met Ser Lys Tyr Lys Pro His Ile Leu Leu Ser Gln Glu  
 65 70 75 80  
 Asn Thr Gln Ile Arg Asp Leu Gln Gln Glu Asn Arg Glu Leu Trp Ile  
 85 90 95  
 Ser Leu Glu Glu His Gln Asp Ala Leu Glu Leu Ile Met Ser Lys Tyr  
 100 105 110  
 Arg Lys Gln Met Leu Gln Leu Met Val Ala Lys Lys Ala Val Asp Ala  
 115 120 125  
 Glu Pro Val Leu Lys Ala His Gln Ser His Ser Ala Glu Ile Glu Ser  
 130 135 140  
 Gln Ile Asp Arg Ile Cys Glu Met Gly Glu Val Met Arg Lys Ala Val  
 145 150 155 160  
 Gln Val Asp Asp Asp Gln Phe Cys Lys Ile Gln Glu Lys Leu Ala Gln  
 165 170 175  
 Leu Glu Leu Glu Asn Lys Glu Leu Arg Glu Leu Leu Ser Ile Ser Ser  
 180 185 190  
 Glu Ser Leu Gln Ala Arg Lys Glu Asn Ser Met Asp Thr Ala Ser Gln  
 195 200 205  
 Ala Ile Lys  
 210

<210> 4211

<211> 122

<212> PRT

<213> Homo sapiens

<400> 4211

Met Cys Tyr Leu Leu Leu Leu Ile Gln Thr Ala Glu Leu Leu Ile  
 1 5 10 15  
 His Pro Gln Gly Leu Gln Ala Val Ser Asn Gly Glu Ser Ala Leu Lys  
 20 25 30  
 Gly Thr Arg Pro Thr Phe Ser Ser Pro Phe Ile Leu Val Thr Glu Gly  
 35 40 45

Arg Lys Glu Trp Glu Gly Val Phe Leu Ser Ser Gly Trp Lys Gly Asn  
 50 55 60  
 Thr Leu Ser Asn Tyr Tyr Ile Ser Leu Val Phe Tyr Tyr Ser Arg Ile  
 65 70 75 80  
 Leu Gln Pro Tyr Phe Tyr Cys Leu Trp Gly Lys Leu Glu Met Val Thr  
 85 90 95  
 Leu Ile Arg Ser Val Trp Arg Gly Ile Asn Gly Gly Asp Lys Ile Gln  
 100 105 110  
 Leu Val Leu Glu Asn Val Lys Val Leu Lys  
 115 120

<210> 4212

<211> 1082

<212> PRT

<213> Homo sapiens

<400> 4212

Met Ala Pro Glu Asp Lys Asp Pro Asp Leu Glu Thr Ile Leu Asn Ile  
 1 5 10 15  
 Pro Ser Ala Leu Thr Pro Thr Val Val Pro Val Ile Val Thr Val Pro  
 20 25 30  
 Gln Ser Lys Ala Lys Gly Lys Ile Lys Gly Lys Glu Lys Pro Lys Glu  
 35 40 45  
 Ser Leu Lys Glu Glu Glu His Pro Lys Glu Glu Glu Lys Lys Glu Glu  
 50 55 60  
 Glu Val Glu Pro Glu Pro Val Leu Gln Glu Thr Leu Asp Val Pro Thr  
 65 70 75 80  
 Phe Gln Ser Leu Asn Val Ser Cys Pro Ser Gly Leu Leu Leu Thr Phe  
 85 90 95  
 Ile Gly Gln Glu Ser Thr Gly Gln Tyr Val Ile Asp Glu Glu Pro Thr  
 100 105 110  
 Trp Asp Ile Met Val Arg Gln Ser Tyr Pro Gln Arg Val Lys His Tyr  
 115 120 125  
 Glu Phe Tyr Lys Thr Val Met Pro Pro Ala Glu Gln Glu Ala Ser Arg  
 130 135 140



Val Ile Thr Ser Gln Gly Thr Val Val Lys Tyr Met Leu Asp Gly Ser  
 145 150 155 160  
 Thr Gln Ile Leu Phe Ala Asp Gly Ala Val Ser Arg Ser Pro Asn Ser  
 165 170 175  
  
 Gly Leu Ile Cys Pro Pro Ser Glu Met Pro Ala Thr Pro His Ser Gly  
 180 185 190  
 Asp Leu Met Asp Ser Ile Ser Gln Gln Lys Ser Glu Thr Ile Pro Ser  
 195 200 205  
 Glu Ile Thr Asn Thr Lys Lys Gly Lys Ser His Lys Ser Gln Ser Ser  
 210 215 220  
 Met Ala His Lys Gly Glu Ile His Asp Pro Pro Pro Glu Ala Val Gln  
 225 230 235 240  
 Thr Val Thr Pro Val Glu Val His Ile Gly Thr Trp Phe Thr Thr Thr  
 245 250 255  
 Pro Glu Gly Asn Arg Ile Gly Thr Lys Gly Leu Glu Arg Ile Ala Asp  
 260 265 270  
 Leu Thr Pro Leu Leu Ser Phe Gln Ala Thr Asp Pro Val Asn Gly Thr  
 275 280 285  
 Val Met Thr Thr Arg Glu Asp Lys Val Val Ile Val Glu Arg Lys Asp  
 290 295 300  
 Gly Thr Arg Ile Val Asp His Ala Asp Gly Thr Arg Ile Thr Thr Phe  
 305 310 315 320  
 Tyr Gln Val Tyr Glu Asp Gln Ile Ile Leu Pro Asp Asp Gln Glu Thr  
 325 330 335  
 Thr Glu Gly Pro Arg Thr Val Thr Arg Gln Val Lys Cys Met Arg Val  
 340 345 350  
 Glu Ser Ser Arg Tyr Ala Thr Val Ile Ala Asn Cys Glu Asp Ser Ser  
 355 360 365  
 Cys Cys Ala Thr Phe Gly Asp Gly Thr Thr Ile Ile Ala Lys Pro Gln  
 370 375 380  
 Gly Thr Tyr Gln Val Leu Pro Pro Asn Thr Gly Ser Leu Tyr Ile Asp  
 385 390 395 400  
 Lys Asp Cys Ser Ala Val Tyr Cys His Glu Ser Ser Ser Asn Ile Tyr  
 405 410 415  
 Tyr Pro Phe Gln Lys Arg Glu Gln Leu Arg Ala Gly Arg Tyr Ile Met

|   |     |     |
|---|-----|-----|
| 420   | 425 | 430 |
| Arg His Thr Ser Glu Val Ile Cys Glu Val Leu Asp Pro Glu Gly Asn |     |     |
| 435   | 440 | 445 |
| Thr Phe Gln Val Met Ala Asp Gly Ser Ile Ser Thr Ile Leu Pro Glu |     |     |
| 450   | 455 | 460 |
| Lys Lys Leu Glu Asp Asp Leu Asn Glu Lys Thr Glu Gly Tyr Asp Ser |     |     |
| 465   | 470 | 475 |
| Leu Ser Ser Met His Leu Glu Lys Asn His Gln Gln Ile Tyr Gly Glu |     |     |
| 485   | 490 | 495 |
| His Val Pro Arg Phe Phe Val Met Tyr Ala Asp Gly Ser Gly Met Glu |     |     |
| 500   | 505 | 510 |
| Leu Leu Arg Asp Ser Asp Ile Glu Glu Tyr Leu Ser Leu Ala Tyr Lys |     |     |
| 515   | 520 | 525 |
| Glu Ser Asn Thr Val Val Leu Gln Glu Pro Val Gln Glu Gln Pro Gly |     |     |
| 530   | 535 | 540 |
| Thr Leu Thr Ile Thr Val Leu Arg Pro Phe His Glu Ala Ser Pro Trp |     |     |
| 545   | 550 | 555 |
| Gln Val Lys Lys Glu Asp Thr Ile Val Pro Pro Asn Leu Arg Ser Arg |     |     |
| 565   | 570 | 575 |
| Ser Trp Glu Thr Phe Pro Ser Val Glu Lys Lys Thr Pro Gly Pro Pro |     |     |
| 580   | 585 | 590 |
| Phe Gly Thr Gln Ile Trp Lys Gly Leu Cys Ile Glu Ser Lys Gln Leu |     |     |
| 595   | 600 | 605 |
| Val Ser Ala Pro Gly Ala Ile Leu Lys Ser Pro Ser Val Leu Gln Met |     |     |
| 610   | 615 | 620 |
| Arg Gln Phe Ile Gln His Glu Val Ile Lys Asn Glu Val Lys Leu Arg |     |     |
| 625   | 630 | 635 |
| Leu Gln Val Ser Leu Lys Asp Tyr Ile Asn Tyr Ile Leu Lys Lys Glu |     |     |
| 645   | 650 | 655 |
| Asp Glu Leu Gln Glu Met Met Ala Lys Asp Ser Arg Thr Glu Glu Glu |     |     |
| 660   | 665 | 670 |
| Arg Gly Asn Ala Ala Asp Leu Leu Lys Leu Val Met Ser Phe Pro Lys |     |     |
| 675   | 680 | 685 |
| Met Glu Glu Thr Thr Lys Ser His Val Thr Glu Val Ala Ala His Leu |     |     |
| 690   | 695 | 700 |
| Thr Asp Leu Phe Lys Gln Ser Leu Ala Thr Pro Pro Lys Cys Pro Pro |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 705   | 710 | 715 | 720 |
| Asp Thr Phe Gly Lys Asp Phe Phe Glu Lys Thr Trp Arg His Thr Ala |     |     |     |
| 725   | 730 | 735 |     |
| Ser Ser Lys Arg Trp Lys Glu Lys Ile Asp Lys Thr Arg Lys Glu Ile |     |     |     |
| 740   | 745 | 750 |     |
| Glu Thr Thr Gln Asn Tyr Leu Met Asp Ile Lys Asn Arg Ile Ile Pro |     |     |     |
| 755   | 760 | 765 |     |
| Pro Phe Phe Lys Ser Glu Leu Asn Gln Leu Tyr Gln Ser Gln Tyr Asn |     |     |     |
| 770   | 775 | 780 |     |
| His Leu Asp Ser Leu Ser Lys Lys Leu Pro Ser Phe Thr Lys Lys Asn |     |     |     |
| 785   | 790 | 795 | 800 |
| Glu Asp Ala Asn Glu Thr Ala Val Gln Asp Thr Ser Asp Leu Asn Leu |     |     |     |
| 805   | 810 | 815 |     |
| Asp Phe Lys Pro His Lys Val Ser Glu Gln Lys Ser Ser Gly Val Pro |     |     |     |
| 820   | 825 | 830 |     |
| Ser Leu Pro Lys Pro Glu Ile Ser Ala Asp Lys Lys Asp Phe Thr Ala |     |     |     |
| 835   | 840 | 845 |     |
| Gln Asn Gln Thr Glu Asn Leu Thr Lys Ser Pro Glu Glu Ala Glu Ser |     |     |     |
| 850   | 855 | 860 |     |
| Tyr Glu Pro Val Lys Ile Pro Thr Gln Ser Leu Leu Gln Asp Val Ala |     |     |     |
| 865   | 870 | 875 | 880 |
| Gly Gln Thr Arg Lys Glu Lys Val Lys Leu Pro His Tyr Leu Leu Ser |     |     |     |
| 885   | 890 | 895 |     |
| Ser Lys Pro Lys Ser Gln Pro Leu Ala Lys Val Gln Asp Ser Val Gly |     |     |     |
| 900   | 905 | 910 |     |
| Gly Lys Val Asn Thr Ser Ser Val Ala Ser Ala Ala Ile Asn Asn Ala |     |     |     |
| 915   | 920 | 925 |     |
| Lys Ser Ser Leu Phe Gly Phe His Leu Leu Pro Ser Ser Val Lys Phe |     |     |     |
| 930   | 935 | 940 |     |
| Gly Val Leu Lys Glu Gly His Thr Tyr Ala Thr Val Val Lys Leu Lys |     |     |     |
| 945   | 950 | 955 | 960 |
| Asn Val Gly Val Asp Phe Cys Arg Phe Lys Val Lys Gln Pro Pro Pro |     |     |     |
| 965   | 970 | 975 |     |
| Ser Thr Gly Leu Lys Val Thr Tyr Lys Pro Gly Pro Val Ala Ala Gly |     |     |     |
| 980   | 985 | 990 |     |
| Met Gln Thr Glu Leu Asn Ile Glu Leu Phe Ala Thr Ala Val Gly Glu |     |     |     |

|   |      |      |
|---|------|------|
| 995   | 1000 | 1005 |
| Asp Gly Ala Lys Gly Ser Ala His Ile Ser His Asn Ile Glu Ile Met |      |      |
| 1010  | 1015 | 1020 |
| Thr Glu His Glu Val Leu Phe Leu Pro Val Glu Ala Thr Val Leu Thr |      |      |
| 1025  | 1030 | 1035 |
| Ser Ser Asn Tyr Asp Lys Arg Pro Lys Asp Phe Pro Gln Gly Lys Glu |      | 1040 |
| 1045  | 1050 | 1055 |
| Asn Pro Met Val Gln Arg Thr Ser Thr Ile Tyr Ser Ser Thr Leu Gly |      |      |
| 1060  | 1065 | 1070 |
| Val Phe Met Ser Arg Lys Val Ser Pro His                         |      |      |
| 1075  | 1080 |      |

&lt;210&gt; 4213

&lt;211&gt; 254

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4213

|   |
|---|
| Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Lys Gly |
| 1 5 10 15   |
| Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Ala Leu Val Gln |
| 20 25 30  |
| Pro Gly Arg Ser Leu Arg Leu Ser Cys Lys Ser Ser Gly Phe Thr Phe |
| 35 40 45  |
| Gly Asp Tyr Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu |
| 50 55 60  |
| Glu Trp Val Gly Phe Ile Arg Asn Lys Ala Phe Gly Gly Thr Thr Ile |
| 65 70 75 80   |
| Tyr Ala Ala Ser Val Glu Gly Arg Phe Ser Ile Ser Arg Asp Asp Ser |
| 85 90 95  |
| Lys Gly Val Ala Tyr Leu Gln Met Ser Ser Leu Gln Thr Glu Asp Thr |
| 100 105 110   |
| Ala Val Tyr Tyr Cys Thr Arg Asp Ile Phe Val Thr Gly Ile Tyr His |
| 115 120 125   |
| Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser |

|   |     |     |     |
|---|-----|-----|-----|
| 130   | 135 | 140 |     |
| Gly Glu Ser Ser Gln Pro Leu Ser Cys Phe Gln Ser Glu Gly Phe His |     |     |     |
| 145   | 150 | 155 | 160 |
| Tyr Ile Phe Gly Gly Lys Tyr Val Cys Trp Val Ser Cys Gln Lys Ser |     |     |     |
|   | 165 | 170 | 175 |
| Arg Gly Thr Val Gly Gly Ala Arg Glu Asn Val Leu Arg Gln Arg Arg |     |     |     |
|   | 180 | 185 | 190 |
| Pro Asn Arg Arg Val Pro Arg Ala Pro Asp Val Pro Ser Ser Ser Ala |     |     |     |
|   | 195 | 200 | 205 |
| Gln Gln His Gly Ser Val Cys Gly Gln Gly His Pro Gly Pro Leu Gly |     |     |     |
| 210   | 215 | 220 |     |
| Ser His Ala Gln Gln Pro Pro Gly Pro Pro Arg Val Gln Ser Glu Arg |     |     |     |
| 225   | 230 | 235 | 240 |
| Val Pro Gly Thr Glu Arg Gly Ala Ser Ser Cys Leu Arg Ser         |     |     |     |
|   | 245 | 250 |     |

&lt;210&gt; 4214

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4214

|   |    |    |    |
|---|----|----|----|
| Met Pro Ser Pro Pro Thr Ala Ser Leu Leu Met Gln Gly Ser Gln Pro |    |    |    |
| 1   | 5  | 10 | 15 |
| His Pro Arg Ala Leu His Ile Arg Phe His Ser Cys Lys Tyr Asn Gly |    |    |    |
|   | 20 | 25 | 30 |
| Pro Pro Ser Val Leu Gln Ile Ser Pro Ala His His Trp Ala Ser Arg |    |    |    |
|   | 35 | 40 | 45 |
| Ala Ala Ala Cys Pro Leu Leu Arg His Leu Ala Gly Gly Ser Leu Pro |    |    |    |
| 50  | 55 | 60 |    |
| Cys Ser Pro Cys Gly Arg Asp Pro Arg Ala Leu Val Pro Ala Cys His |    |    |    |
| 65  | 70 | 75 | 80 |
| Ser Pro Cys Cys Ile Ser Leu Pro Pro Leu Pro Glu Glu Phe Leu Leu |    |    |    |
|   | 85 | 90 | 95 |
| Arg Ala Cys Ser Leu Asn Trp                                     |    |    |    |

100

&lt;210&gt; 4215

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4215

```

Met Leu Lys Phe Ser Leu Val Phe Leu Phe Phe Leu Phe Phe Pro Arg
  1             5             10             15
Arg Ser Leu Ala Leu Ser Pro Arg Leu Glu Tyr Asn Gly Met Ile Ser
      20             25             30
Thr His Cys Asn Leu His Leu Leu Gly Ser Ser Asp Ser Pro Ala Ser
      35             40             45
Ala Ser Arg Val Ala Arg Ile Thr Gly Ala His His Asn Val Trp Pro
      50             55             60
Ile Phe Cys Ile Phe Ser Arg Asp Arg Val Ser Pro Cys Trp Pro Gly
      65             70             75             80
Trp Ser Ile Thr Pro Asp Leu Val Ile Cys Leu Pro Gln Pro Pro Lys
      85             90             95
Val Leu Gly Leu Gln Ala
      100

```

&lt;210&gt; 4216

&lt;211&gt; 762

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4216

```

Met His Asn Leu Ile Phe Gln Met Tyr Asp Glu Gly Glu Arg Glu Ile
  1             5             10             15
Asn Ile Thr Ser Ala Leu Ala Glu Lys Ile Lys Val Asn Trp Thr Pro
      20             25             30
Glu Ile Asn Lys Glu His Leu Leu Gln Gly Leu Leu Pro Asp Val Gln

```

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Val Pro Thr Ser Val Lys Asp Met Arg Tyr Cys Gln Val Ser Phe Gln |     |     |
| 50  | 55  | 60  |
| Asp Asp His Val Ser Leu Glu Ser Ala Phe Thr Val Arg Pro Leu Pro |     |     |
| 65  | 70  | 75  |
| 80  |     |     |
| Asp Glu Pro Lys His Leu Lys Cys Glu Met Lys Gly Gly Lys Thr Val |     |     |
| 85  | 90  | 95  |
| Gln Met Gly Gln Glu Leu Gln Gly Glu Val Val Ile Ile Ile Thr Asp |     |     |
| 100   | 105 | 110 |
| Gln Tyr Gly Asn Gln Ile Gln Ala Phe Ser Pro Ser Ser Leu Ser Ser |     |     |
| 115   | 120 | 125 |
| Leu Ser Ile Ala Gly Val Gly Leu Asp Ser Ser Asn Leu Lys Thr Thr |     |     |
| 130   | 135 | 140 |
| Phe Gln Glu Asn Thr Gln Ser Ile Ser Val Arg Gly Ile Lys Phe Ile |     |     |
| 145   | 150 | 155 |
| 160   |     |     |
| Pro Gly Pro Pro Gly Asn Lys Asp Leu Cys Phe Thr Trp Arg Glu Phe |     |     |
| 165   | 170 | 175 |
| Ser Asp Phe Ile Arg Val Gln Leu Ile Ser Gly Pro Pro Ala Lys Leu |     |     |
| 180   | 185 | 190 |
| Leu Leu Ile Asp Trp Pro Glu Leu Lys Glu Ser Ile Pro Val Ile Asn |     |     |
| 195   | 200 | 205 |
| Gly Arg Asp Leu Gln Asn Pro Ile Ile Val Gln Leu Cys Asp Gln Trp |     |     |
| 210   | 215 | 220 |
| Asp Asn Pro Ala Pro Val Gln His Val Lys Ile Ser Leu Thr Lys Ala |     |     |
| 225   | 230 | 235 |
| 240   |     |     |
| Ser Asn Leu Lys Leu Met Pro Ser Asn Gln Gln His Lys Thr Asp Glu |     |     |
| 245   | 250 | 255 |
| Lys Gly Arg Ala Asn Leu Gly Val Phe Ser Val Phe Ala Pro Arg Gly |     |     |
| 260   | 265 | 270 |
| Glu His Thr Leu Gln Val Lys Ala Ile Tyr Asn Lys Ser Ile Ile Glu |     |     |
| 275   | 280 | 285 |
| Gly Pro Ile Ile Lys Leu Met Ile Leu Pro Asp Pro Glu Lys Pro Val |     |     |
| 290   | 295 | 300 |
| Arg Leu Asn Val Lys Tyr Asp Lys Asp Ala Ser Phe Leu Ala Gly Gly |     |     |
| 305   | 310 | 315 |
| 320   |     |     |

1000



Ile His Asn Ile Asp Ile Pro Thr Thr Gln Gln Val Pro His Ile Glu  
 610 615 620  
 Ala Leu Leu Lys Arg Lys Leu Ser Glu Gln Glu Glu Leu Lys Lys Lys  
 625 630 635 640  
 Pro Arg Arg Ser Cys Thr Leu Pro Asn Tyr Thr Lys Gly Ser Gly Asp  
 645 650 655  
 Val Leu Gly Lys Ile Ala His Leu Ala Gln Ile Glu Asp Asp Arg Ala  
 660 665 670  
 Ala Met Val Ile Ser Trp His Leu Ala Ser Asp Met Asp Cys Val Val  
 675 680 685  
 Thr Leu Thr Thr Asp Ala Ala Arg Arg Ile Tyr Asp Glu Thr Gln Gly  
 690 695 700  
 Arg Gln Gln Val Leu Pro Leu Asp Ser Ile Tyr Lys Lys Thr Leu Pro  
 705 710 715 720  
 Asp Trp Lys Arg Ser Leu Pro His Phe Arg Asn Gly Lys Leu Tyr Phe  
 725 730 735  
 Lys Pro Ile Gly Asp Pro Val Phe Ala Arg Asp Leu Leu Thr Phe Pro  
 740 745 750  
 Asp Asn Val Glu His Cys Glu Thr Gly Cys  
 755 760

&lt;210&gt; 4217

&lt;211&gt; 171

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4217

Met Lys Cys Ile Pro Tyr Ser Val Leu Leu Lys Asp Leu Glu Met Arg  
 1 5 10 15  
 Asn Leu Arg Glu Leu Glu Asp Leu Ile Ile Glu Ala Val Tyr Thr Asp  
 20 25 30  
 Ile Ile Gln Gly Lys Leu Asp Gln Arg Asn Gln Leu Leu Glu Val Asp  
 35 40 45  
 Phe Cys Ile Gly Arg Asp Ile Arg Lys Lys Asp Ile Asn Asn Ile Val  
 50 55 60

Lys Thr Leu His Glu Trp Cys Asp Gly Cys Glu Ala Val Leu Leu Gly  
 65                                70                                75                                80  
 Ile Glu Gln Gln Val Leu Arg Ala Asn Gln Tyr Lys Glu Asn His Asn  
                               85                                90                                95  
 Arg Thr Gln Gln Gln Val Glu Ala Glu Ile Ala Cys Phe Gln Arg Glu  
                               100                                105                                110  
 Lys Arg Asp Val Pro Leu Leu Asn Leu Ile Thr Thr Ala Phe Phe Trp  
                               115                                120                                125  
 Leu Pro Thr Ser Arg Arg His Ser Lys Pro Pro His Pro Pro Arg Leu  
                               130                                135                                140  
 Arg Arg Trp Ser Ser Ser Trp Leu Asn Gly Ser Val Pro Leu Thr Leu  
 145                                150                                155                                160  
 Ser Arg Gly Ser Pro Pro Arg Arg Cys Pro Lys  
                               165                                170

<210> 4218

<211> 608

<212> PRT

<213> Homo sapiens

<400> 4218

Met Arg His Thr Ser Glu Val Ile Cys Glu Val Leu Asp Pro Glu Gly  
 1                                5                                10                                15  
 Asn Thr Phe Gln Val Met Ala Asp Gly Ser Ile Ser Thr Ile Leu Pro  
                               20                                25                                30  
 Glu Lys Lys Leu Glu Asp Asp Leu Asn Glu Lys Thr Glu Gly Tyr Asp  
                               35                                40                                45  
 Ser Leu Ser Ser Met His Leu Glu Lys Asn His Gln Gln Ile Tyr Gly  
                               50                                55                                60  
 Glu His Val Pro Arg Phe Phe Val Met Tyr Ala Asp Gly Ser Gly Met  
 65                                70                                75                                80  
 Glu Leu Leu Arg Asp Ser Asp Ile Glu Glu Tyr Leu Ser Leu Ala Tyr  
                               85                                90                                95  
 Lys Glu Ser Asn Thr Val Val Leu Gln Glu Pro Val Gln Glu Gln Pro  
                               100                                105                                110

Gly Thr Leu Thr Ile Thr Val Leu Arg Pro Phe His Glu Ala Ser Pro  
 115 120 125  
 Trp Gln Val Lys Lys Glu Asp Thr Ile Val Pro Pro Asn Leu Arg Ser  
 130 135 140  
 Arg Ser Trp Glu Thr Phe Pro Ser Val Glu Lys Lys Thr Pro Gly Pro  
 145 150 155 160  
 Pro Phe Gly Thr Gln Ile Trp Lys Gly Leu Cys Ile Glu Ser Lys Gln  
 165 170 175  
 Leu Val Ser Ala Pro Gly Ala Ile Leu Lys Ser Pro Ser Val Leu Gln  
 180 185 190  
 Met Arg Gln Phe Ile Gln His Glu Val Ile Lys Asn Glu Val Lys Leu  
 195 200 205  
 Arg Leu Gln Val Ser Leu Lys Asp Tyr Ile Asn Tyr Ile Leu Lys Lys  
 210 215 220  
 Glu Asp Glu Leu Gln Glu Met Met Val Lys Asp Ser Arg Thr Glu Glu  
 225 230 235 240  
 Glu Arg Gly Asn Ala Ala Asp Leu Leu Lys Leu Val Met Ser Phe Pro  
 245 250 255  
 Lys Met Glu Glu Thr Thr Lys Ser His Val Thr Glu Val Ala Ala His  
 260 265 270  
 Leu Thr Asp Leu Phe Lys Gln Ser Leu Ala Thr Pro Pro Lys Cys Pro  
 275 280 285  
 Pro Asp Thr Phe Gly Lys Asp Phe Phe Glu Lys Thr Trp Arg His Thr  
 290 295 300  
 Ala Ser Ser Lys Arg Trp Lys Glu Lys Ile Asp Lys Thr Arg Lys Glu  
 305 310 315 320  
 Ile Glu Thr Thr Gln Asn Tyr Leu Met Asp Ile Lys Asn Arg Ile Ile  
 325 330 335  
 Pro Pro Phe Phe Lys Ser Glu Leu Asn Gln Leu Tyr Gln Ser Gln Tyr  
 340 345 350  
 Asn His Leu Asp Ser Leu Ser Lys Lys Leu Pro Ser Phe Thr Lys Lys  
 355 360 365  
 Asn Glu Asp Ala Asn Glu Thr Ala Val Gln Asp Thr Ser Asp Leu Asn  
 370 375 380  
 Leu Asp Phe Lys Pro His Lys Val Ser Glu Gln Lys Ser Ser Ser Val  
 385 390 395 400

Pro Ser Leu Pro Lys Pro Glu Ile Ser Ala Asp Lys Lys Asp Phe Thr  
                     405                    410                    415  
 Ala Gln Asn Gln Thr Glu Asn Leu Thr Lys Ser Pro Glu Glu Ala Glu  
                     420                    425                    430  
 Ser Tyr Glu Pro Val Lys Ile Pro Thr Gln Ser Leu Leu Gln Asp Val  
                     435                    440                    445  
 Ala Gly Gln Thr Arg Lys Glu Lys Val Lys Leu Pro His Tyr Leu Leu  
                     450                    455                    460  
 Ser Ser Lys Pro Lys Ser Gln Pro Leu Ala Lys Val Gln Asp Ser Val  
 465                    470                    475                    480  
 Gly Gly Lys Val Asn Thr Ser Ser Val Ala Ser Ala Ala Ile Asn Asn  
                     485                    490                    495  
 Ala Lys Ser Ser Leu Phe Gly Phe His Pro Leu Pro Ser Ser Val Lys  
                     500                    505                    510  
 Phe Gly Val Leu Lys Glu Gly His Thr Tyr Ala Thr Val Val Lys Leu  
                     515                    520                    525  
 Lys Asn Val Gly Val Asp Phe Cys Arg Phe Lys Val Lys Gln Pro Pro  
                     530                    535                    540  
 Pro Ser Thr Gly Leu Lys Val Thr Tyr Lys Pro Gly Pro Val Ala Ala  
 545                    550                    555                    560  
 Gly Met Gln Thr Glu Leu Asn Ile Glu Leu Phe Ala Thr Ala Val Gly  
                     565                    570                    575  
 Glu Asp Gly Ala Lys Gly Ser Ala His Ile Ser His Asn Ile Glu Ile  
                     580                    585                    590  
 Met Thr Glu His Glu Val Leu Phe Leu Pro Val Glu Ala Asn Ile Leu  
                     595                    600                    605

<210> 4219

<211> 252

<212> PRT

<213> Homo sapiens

<400> 4219

Met Ser Cys Trp Val His Leu Pro Asp Gly Val Val Ala Gly Gln Arg

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Gly Phe Ser Leu Pro Ser Arg Gly Gly Arg Ala Glu Ala Pro Leu Thr |     |     |     |
| 20  | 25  | 30  |     |
| Ser Arg Thr Arg Arg Leu Ala Gly Arg Gly Ala Asp Pro Pro Pro     |     |     |     |
| 35  | 40  | 45  |     |
| Pro Ser Arg Met Gly Arg Leu Ala Gly Arg Gly Ala Asp Pro Pro Pro |     |     |     |
| 50  | 55  | 60  |     |
| Pro Pro Ser Arg Thr Gly Arg Leu Ala Trp Arg Gly Leu Thr Pro Thr |     |     |     |
| 65  | 70  | 75  | 80  |
| Ser Leu Leu Asp Gly Val Ala Ala Gly Arg Arg Arg Ser Ser Pro Pro |     |     |     |
| 85  | 90  | 95  |     |
| Arg Arg Gly Gly Cys Arg Ala Asp Arg Leu Leu Thr Ser Gln Thr Gly |     |     |     |
| 100   | 105 | 110 |     |
| Arg Leu Pro Gly Gly Gly Ala Pro His Phe Leu Asp Gly Ala Val Ala |     |     |     |
| 115   | 120 | 125 |     |
| Arg Arg Arg Val Ser Ser Leu Leu Arg Trp Gly Gly Arg Ala Glu Thr |     |     |     |
| 130   | 135 | 140 |     |
| Leu Leu Thr Ser Gln Thr Gly Ser Arg Pro Gly Arg Gly Ala Pro His |     |     |     |
| 145   | 150 | 155 | 160 |
| Ile Pro Asp Gly Ala Ala Gly Gln Arg Arg Ser Pro His Leu Arg Arg |     |     |     |
| 165   | 170 | 175 |     |
| Trp Ala Ala Gly Gln Arg Arg Ser Ser Leu Pro Arg Trp Asp Gly Gly |     |     |     |
| 180   | 185 | 190 |     |
| Gly Ala Glu Thr Leu Leu Thr Phe Gln Thr Gly Gln Pro Gly Arg Gly |     |     |     |
| 195   | 200 | 205 |     |
| Ala Pro His Val Pro Asp Asp Gly Arg Pro Gly Arg Asp Ala Pro His |     |     |     |
| 210   | 215 | 220 |     |
| Phe Pro Asp Gly Val Ala Ala Gly Gln Arg Leu Gln Ser Arg His Phe |     |     |     |
| 225   | 230 | 235 | 240 |
| Gly Arg Pro Arg Gln Ala Gly Gly Arg Trp Arg Leu                 |     |     |     |
| 245   | 250 |     |     |

&lt;210&gt; 4220

&lt;211&gt; 101

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4220

```

Met Leu Leu Val Ala Met Phe Gly Leu Trp Gly Asp Arg Cys Phe Leu
 1             5             10             15
Phe Thr Ser Leu Cys Phe Leu Leu Phe Ser Ala Met Asn Phe Cys Phe
      20             25             30
Ile Ile Arg Asn Asn Ser Arg Tyr Phe Lys Leu His Asn Glu Ile Asn
      35             40             45
Asn Leu Gly His Thr Lys Phe Val Met Asp Ser Glu Leu Gln Gly Thr
      50             55             60
Gly Gln Pro Tyr Gln Ala Gln Pro Pro Ser Pro Ala Ala Val Gly His
      65             70             75             80
Arg Ile Leu Ser Lys Trp Val Gln Met Glu Ile Pro Val Gln Trp Leu
      85             90             95
Tyr Ser Asp Val Asp
      100

```

<210> 4221

<211> 343

<212> PRT

<213> Homo sapiens

<400> 4221

```

Met Ile Gln Glu Pro Ala Leu Pro Pro Gly Trp Glu Met Lys Tyr Thr
 1             5             10             15
Ser Glu Gly Val Arg Tyr Phe Val Asp His Asn Thr Arg Thr Thr Thr
      20             25             30
Phe Lys Asp Pro Arg Pro Gly Phe Glu Ser Gly Thr Lys Gln Gly Ser
      35             40             45
Pro Gly Ala Tyr Asp Arg Ser Phe Arg Trp Lys Tyr His Gln Phe Arg
      50             55             60
Phe Leu Cys His Ser Asn Ala Leu Pro Ser His Val Lys Ile Ser Val
      65             70             75             80
Ser Arg Gln Thr Leu Phe Glu Asp Ser Phe Gln Gln Ile Met Asn Met

```

|   |     |     |     |
|---|-----|-----|-----|
|   | 85  | 90  | 95  |
| Lys Pro Tyr Asp Leu Arg Arg Arg Leu Phe Ile Ile Met Arg Gly Glu |     |     |     |
| 100   | 105 | 110 |     |
| Glu Gly Leu Asp Tyr Gly Gly Ile Ala Arg Glu Trp Phe Phe Leu Leu |     |     |     |
| 115   | 120 | 125 |     |
| Ser His Glu Val Leu Asn Pro Met Tyr Cys Leu Phe Glu Tyr Ala Gly |     |     |     |
| 130   | 135 | 140 |     |
| Lys Asn Asn Tyr Cys Leu Gln Ile Asn Pro Ala Ser Ser Ile Asn Pro |     |     |     |
| 145   | 150 | 155 | 160 |
| Asp His Leu Thr Tyr Phe Arg Phe Ile Gly Arg Phe Ile Ala Met Ala |     |     |     |
| 165   | 170 | 175 |     |
| Leu Tyr His Gly Lys Phe Ile Asp Thr Gly Phe Thr Leu Pro Phe Tyr |     |     |     |
| 180   | 185 | 190 |     |
| Lys Arg Met Leu Asn Lys Arg Pro Thr Leu Lys Asp Leu Glu Ser Ile |     |     |     |
| 195   | 200 | 205 |     |
| Asp Pro Glu Phe Tyr Asn Ser Ile Val Trp Ile Lys Glu Asn Asn Leu |     |     |     |
| 210   | 215 | 220 |     |
| Glu Glu Cys Gly Leu Glu Leu Tyr Phe Ile Gln Asp Met Glu Ile Leu |     |     |     |
| 225   | 230 | 235 | 240 |
| Gly Lys Val Thr Thr His Glu Leu Lys Glu Gly Gly Glu Ser Ile Arg |     |     |     |
| 245   | 250 | 255 |     |
| Val Thr Glu Glu Asn Lys Glu Glu Tyr Ile Met Leu Leu Thr Asp Trp |     |     |     |
| 260   | 265 | 270 |     |
| Arg Phe Thr Arg Gly Val Glu Glu Gln Thr Lys Ala Phe Leu Asp Gly |     |     |     |
| 275   | 280 | 285 |     |
| Phe Asn Glu Val Ala Pro Leu Glu Trp Leu Arg Tyr Phe Asp Glu Lys |     |     |     |
| 290   | 295 | 300 |     |
| Glu Leu Glu Leu Met Leu Cys Gly Met Gln Glu Ile Asp Arg Ala Thr |     |     |     |
| 305   | 310 | 315 | 320 |
| Gly Arg Arg Ala Pro Ser Thr Gly Thr Thr Pro Arg Thr Ala Ser Arg |     |     |     |
| 325   | 330 | 335 |     |
| Ser Ser Gly Ser Gly Arg Trp                                     |     |     |     |
| 340   |     |     |     |

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4222

Met Arg Trp Arg Ala Asp Gly Arg Ser Leu Glu Lys Leu Pro Val His  
 1 5 10 15  
 Met Gly Leu Val Ile Thr Glu Val Glu Gln Glu Pro Ser Phe Ser Asp  
 20 25 30  
 Ile Ala Ser Leu Val Val Trp Cys Met Ala Val Gly Ile Ser Tyr Ile  
 35 40 45  
 Ser Val Tyr Asp His Gln Gly Ile Phe Lys Arg Asn Asn Ser Arg Leu  
 50 55 60  
 Met Asp Glu Ile Leu Lys Gln Gln Gln Glu Leu Leu Gly Leu Asp Cys  
 65 70 75 80  
 Ser Lys Tyr Ser Pro Glu Phe Ala Asn Ser Asn Asp Lys Asp Asp Gln  
 85 90 95  
 Val Leu Asn Cys His Leu Ala Val Lys Val Leu Ser Pro Glu Asp Gly  
 100 105 110  
 Lys Ala Asp Ile Val Arg Ala Ala Gln Asp Phe Cys Gln Leu Val Ala  
 115 120 125  
 Gln Lys Gln Lys Arg Pro Thr Asp Leu Asp Val Asp Thr Leu Ala Ser  
 130 135 140  
 Leu Leu Ser Ser Asn Gly Cys Pro Asp Pro Asp Leu Val Leu Lys Phe  
 145 150 155 160  
 Gly Pro Val Asp Ser Thr Leu Gly Phe Leu Pro Trp His Ile Arg Leu  
 165 170 175  
 Thr Glu Ile Val Ser Leu Pro Ser His Leu Asn Ile Ser Tyr Glu Asp  
 180 185 190  
 Phe Phe Ser Ala Leu Arg Gln Tyr Ala Ala Cys Glu Gln Arg Leu Gly  
 195 200 205  
 Lys

&lt;210&gt; 4223



&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4223

```

Met Gly Val Gly Asn Ile Ala Gly Ser Glu Ser Ser Glu Val Gly Met
  1             5             10             15
Glu Val Ser Gln Leu Arg Leu Gly Pro Phe Cys Arg Ala Leu Ser Val
          20             25             30
Tyr Ser Trp Phe Ser Ile Arg Gly Gln Pro Ala Gly Gly Leu Glu Asn
      35             40             45
Arg Ser Leu Gly Thr Lys Gln Gly Leu Cys Pro Gly Ala Cys Tyr Val
      50             55             60
Ala Gln Pro Thr Arg Leu Ser Pro Arg Gln Ser Cys Pro Lys Pro Arg
      65             70             75             80
Lys Leu Met Tyr His Pro Arg Gly Arg Glu Pro Thr Phe Pro Ser Lys
          85             90             95
Glu Val Phe Tyr Leu Trp
          100

```

&lt;210&gt; 4224

&lt;211&gt; 885

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4224

```

Met Gln Glu Ala Ile Ile Leu Leu Ala Leu Leu Gly Ala Met Ser Gly
  1             5             10             15
Gly Glu Ala Leu His Leu Ile Leu Leu Pro Ala Thr Gly Asn Val Ala
          20             25             30
Glu Asn Ser Pro Pro Gly Thr Ser Val His Lys Phe Ser Val Lys Leu
      35             40             45
Ser Ala Ser Leu Ser Pro Val Ile Pro Gly Phe Pro Gln Ile Val Asn
      50             55             60
Ser Asn Pro Leu Thr Glu Ala Phe Arg Val Asn Trp Leu Ser Gly Thr

```

|   |     |     |     |
|---|-----|-----|-----|
| 65  | 70  | 75  | 80  |
| Tyr Phe Glu Val Val Thr Thr Gly Met Glu Gln Leu Asp Phe Glu Thr |     |     |     |
|   | 85  | 90  | 95  |
| Gly Pro Asn Ile Phe Asp Leu Gln Ile Tyr Val Lys Asp Glu Val Gly |     |     |     |
|   | 100 | 105 | 110 |
| Val Thr Asp Leu Gln Val Leu Thr Val Gln Val Thr Asp Val Asn Glu |     |     |     |
|   | 115 | 120 | 125 |
| Pro Pro Gln Phe Gln Gly Asn Leu Ala Glu Gly Leu His Leu Tyr Ile |     |     |     |
|   | 130 | 135 | 140 |
| Val Glu Arg Ala Asn Pro Gly Phe Ile Tyr Gln Val Glu Ala Phe Asp |     |     |     |
| 145   | 150 | 155 | 160 |
| Pro Glu Asp Thr Ser Arg Asn Ile Pro Leu Ser Tyr Phe Leu Ile Ser |     |     |     |
|   | 165 | 170 | 175 |
| Pro Pro Lys Ser Phe Arg Met Ser Ala Asn Gly Thr Leu Phe Ser Thr |     |     |     |
|   | 180 | 185 | 190 |
| Thr Glu Leu Asp Phe Glu Ala Gly His Arg Ser Phe His Leu Ile Val |     |     |     |
|   | 195 | 200 | 205 |
| Glu Val Arg Asp Ser Gly Gly Leu Lys Ala Ser Thr Glu Leu Gln Val |     |     |     |
|   | 210 | 215 | 220 |
| Asn Ile Val Asn Leu Asn Asp Glu Val Pro Arg Phe Thr Ser Pro Thr |     |     |     |
| 225   | 230 | 235 | 240 |
| Arg Val Tyr Thr Val Leu Glu Glu Leu Ser Pro Gly Thr Ile Val Ala |     |     |     |
|   | 245 | 250 | 255 |
| Asn Ile Thr Ala Glu Asp Pro Asp Asp Glu Gly Phe Pro Ser His Leu |     |     |     |
|   | 260 | 265 | 270 |
| Leu Tyr Ser Ile Thr Thr Val Ser Lys Tyr Phe Met Ile Asn Gln Leu |     |     |     |
|   | 275 | 280 | 285 |
| Thr Gly Thr Ile Gln Val Ala Gln Arg Ile Asp Arg Asp Ala Gly Glu |     |     |     |
|   | 290 | 295 | 300 |
| Leu Arg Gln Asn Pro Thr Ile Ser Leu Glu Val Leu Val Lys Asp Arg |     |     |     |
| 305   | 310 | 315 | 320 |
| Pro Tyr Gly Gly Gln Glu Asn Arg Ile Gln Ile Thr Phe Ile Val Glu |     |     |     |
|   | 325 | 330 | 335 |
| Asp Val Asn Asp Asn Pro Ala Thr Cys Gln Lys Phe Thr Phe Ser Ile |     |     |     |
|   | 340 | 345 | 350 |
| Met Val Pro Glu Arg Thr Ala Lys Gly Thr Leu Leu Leu Asp Leu Asn |     |     |     |

|   |     |     |
|---|-----|-----|
| 355   | 360 | 365 |
| Lys Phe Cys Phe Asp Asp Asp Ser Glu Ala Pro Asn Asn Arg Phe Asn |     |     |
| 370   | 375 | 380 |
| Phe Thr Met Pro Ser Gly Val Gly Ser Gly Ser Arg Phe Leu Gln Asp |     |     |
| 385   | 390 | 395 |
| Pro Ala Gly Ser Gly Lys Ile Val Leu Ile Gly Asp Leu Asp Tyr Glu |     |     |
| 405   | 410 | 415 |
| Asn Pro Ser Asn Leu Ala Ala Gly Asn Lys Tyr Thr Val Ile Ile Gln |     |     |
| 420   | 425 | 430 |
| Val Gln Asp Val Ala Pro Pro Tyr Tyr Lys Asn Asn Val Tyr Val Tyr |     |     |
| 435   | 440 | 445 |
| Ile Leu Thr Ser Pro Glu Asn Glu Phe Pro Leu Ile Phe Asp Arg Pro |     |     |
| 450   | 455 | 460 |
| Ser Tyr Val Phe Asp Val Ser Glu Arg Arg Pro Ala Arg Thr Arg Val |     |     |
| 465   | 470 | 475 |
| Gly Gln Val Arg Ala Thr Asp Lys Asp Leu Pro Gln Ser Ser Leu Leu |     |     |
| 485   | 490 | 495 |
| Tyr Ser Ile Ser Thr Gly Gly Ala Ser Leu Gln Tyr Pro Asn Val Phe |     |     |
| 500   | 505 | 510 |
| Trp Ile Asn Pro Lys Thr Gly Glu Leu Gln Leu Val Thr Lys Val Asp |     |     |
| 515   | 520 | 525 |
| Cys Glu Thr Thr Pro Ile Tyr Ile Leu Arg Ile Gln Ala Thr Asn Asn |     |     |
| 530   | 535 | 540 |
| Glu Asp Thr Ser Ser Val Thr Val Thr Val Asn Ile Leu Glu Glu Asn |     |     |
| 545   | 550 | 555 |
| Asp Glu Lys Pro Ile Cys Thr Pro Asn Ser Tyr Phe Leu Ala Leu Pro |     |     |
| 565   | 570 | 575 |
| Val Asp Leu Lys Val Gly Thr Asn Ile Gln Asn Phe Lys Leu Thr Cys |     |     |
| 580   | 585 | 590 |
| Thr Asp Leu Asp Ser Ser Pro Arg Ser Phe Arg Tyr Ser Ile Gly Pro |     |     |
| 595   | 600 | 605 |
| Gly Asn Val Asn Asn His Phe Thr Phe Ser Pro Asn Ala Gly Ser Asn |     |     |
| 610   | 615 | 620 |
| Val Thr Arg Leu Leu Leu Thr Ser Arg Phe Asp Tyr Ala Gly Gly Phe |     |     |
| 625   | 630 | 635 |
| Asp Lys Ile Trp Asp Tyr Lys Leu Leu Val Tyr Val Thr Asp Asp Asn |     |     |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 645 |     | 650 |     | 655 |
| Leu Met Ser Asp Arg Lys Lys Ala Glu Ala Leu Val Glu Thr Gly Thr |     |     |     |     |     |
|   | 660 |     | 665 |     | 670 |
| Val Thr Leu Ser Ile Lys Val Ile Pro His Pro Thr Thr Ile Ile Thr |     |     |     |     |     |
|   | 675 |     | 680 |     | 685 |
| Thr Thr Pro Arg Pro Arg Val Thr Tyr Gln Val Leu Arg Lys Asn Val |     |     |     |     |     |
|   | 690 |     | 695 |     | 700 |
| Tyr Ser Pro Ser Ala Trp Tyr Val Pro Phe Val Ile Thr Leu Gly Ser |     |     |     |     |     |
| 705   |     | 710 |     | 715 | 720 |
| Ile Leu Leu Leu Gly Leu Leu Val Tyr Leu Val Val Leu Leu Ala Lys |     |     |     |     |     |
|   | 725 |     | 730 |     | 735 |
| Ala Ile His Arg His Cys Pro Cys Lys Thr Gly Lys Asn Lys Glu Pro |     |     |     |     |     |
|   | 740 |     | 745 |     | 750 |
| Leu Thr Lys Lys Gly Glu Thr Lys Thr Ala Glu Arg Asp Val Val Val |     |     |     |     |     |
|   | 755 |     | 760 |     | 765 |
| Glu Thr Ile Gln Met Asn Thr Ile Phe Asp Gly Glu Ala Ile Asp Pro |     |     |     |     |     |
|   | 770 |     | 775 |     | 780 |
| Val Thr Gly Glu Thr Tyr Glu Phe Asn Ser Lys Thr Gly Ala Arg Lys |     |     |     |     |     |
| 785   |     | 790 |     | 795 | 800 |
|   |     |     |     |     |     |
| Trp Lys Asp Pro Leu Thr Gln Met Pro Lys Trp Lys Glu Ser Ser His |     |     |     |     |     |
|   | 805 |     | 810 |     | 815 |
| Gln Gly Ala Ala Pro Arg Arg Val Thr Ala Gly Glu Gly Met Gly Ser |     |     |     |     |     |
|   | 820 |     | 825 |     | 830 |
| Leu Arg Ser Ala Asn Trp Glu Glu Asp Glu Leu Ser Gly Lys Ala Trp |     |     |     |     |     |
|   | 835 |     | 840 |     | 845 |
| Ala Glu Asp Ala Gly Leu Gly Ser Arg Asn Glu Gly Gly Lys Leu Gly |     |     |     |     |     |
|   | 850 |     | 855 |     | 860 |
| Asn Pro Lys Asn Arg Asn Pro Ala Phe Met Asn Arg Ala Tyr Pro Lys |     |     |     |     |     |
| 865   |     | 870 |     | 875 | 880 |
| Pro His Pro Gly Lys   |     |     |     |     |     |
|   | 885 |     |     |     |     |

&lt;210&gt; 4225

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4225

Met Asp Asn Pro Leu Leu Lys Tyr Ser Ala Lys Asp Tyr Phe Phe Lys  
 1 5 10 15  
 Ala Ala Leu Cys His Phe Ile Val Asp Glu Leu Asn Val Lys Leu Ala  
 20 25 30  
 Leu Glu Lys Tyr Glu Glu Met Phe Pro Ala Phe Thr Asp Ser Arg Glu  
 35 40 45  
 Cys Lys Leu Leu Lys Lys Leu Leu Glu Ala His Glu Glu Gln Asn Ser  
 50 55 60  
 Glu Ala Tyr Thr Glu Ala Val Lys Glu Phe Asp Ser Ile Ser Arg Leu  
 65 70 75 80  
 Asp Gln Trp Leu Thr Thr Met Leu Leu Arg Ile Lys Lys Ser Ile Gln  
 85 90 95  
 Gly Asp Gly Glu Gly Asp Gly Asp Leu Lys  
 100 105

&lt;210&gt; 4226

&lt;211&gt; 403

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4226

Met Asn Asn Asn Met Ser Leu Gln Asp Ala Glu Trp Tyr Trp Gly Asp  
 1 5 10 15  
 Ile Ser Arg Glu Glu Val Asn Glu Lys Leu Arg Asp Thr Ala Asp Gly  
 20 25 30  
 Thr Phe Leu Val Arg Asp Ala Ser Thr Lys Met His Gly Asp Tyr Thr  
 35 40 45  
 Leu Thr Leu Arg Lys Gly Gly Asn Asn Lys Leu Ile Lys Ile Phe His  
 50 55 60  
 Arg Asp Gly Lys Tyr Gly Phe Ser Asp Pro Leu Thr Phe Ser Ser Val

|   |     |     |     |
|---|-----|-----|-----|
| 65  | 70  | 75  | 80  |
| Val Glu Leu Ile Asn His Tyr Arg Asn Glu Ser Leu Ala Gln Tyr Asn |     |     |     |
|   | 85  | 90  | 95  |
| Pro Lys Leu Asp Val Lys Leu Leu Tyr Pro Val Ser Lys Tyr Gln Gln |     |     |     |
|   | 100 | 105 | 110 |
| Asp Gln Val Val Lys Glu Asp Asn Ile Glu Ala Val Gly Lys Lys Leu |     |     |     |
|   | 115 | 120 | 125 |
| His Glu Tyr Asn Thr Gln Phe Gln Glu Lys Ser Arg Glu Tyr Asp Arg |     |     |     |
|   | 130 | 135 | 140 |
| Leu Tyr Glu Glu Tyr Thr Arg Thr Ser Gln Glu Ile Gln Met Lys Arg |     |     |     |
| 145   | 150 | 155 | 160 |
| Thr Ala Ile Glu Ala Phe Asn Glu Thr Ile Lys Ile Phe Glu Glu Gln |     |     |     |
|   | 165 | 170 | 175 |
| Cys Gln Thr Gln Glu Arg Tyr Ser Lys Glu Tyr Ile Glu Lys Phe Lys |     |     |     |
|   | 180 | 185 | 190 |
| Arg Glu Gly Asn Glu Lys Glu Ile Gln Arg Ile Met His Asn Tyr Asp |     |     |     |
|   | 195 | 200 | 205 |
| Lys Leu Lys Ser Arg Ile Ser Glu Ile Ile Asp Ser Arg Arg Arg Leu |     |     |     |
|   | 210 | 215 | 220 |
| Glu Glu Asp Leu Lys Lys Gln Ala Ala Glu Tyr Arg Glu Ile Asp Lys |     |     |     |
| 225   | 230 | 235 | 240 |
| Arg Met Asn Ser Ile Lys Pro Asp Leu Ile Gln Leu Arg Lys Thr Arg |     |     |     |
|   | 245 | 250 | 255 |
| Asp Gln Tyr Leu Met Trp Leu Thr Gln Lys Gly Val Arg Gln Lys Lys |     |     |     |
|   | 260 | 265 | 270 |
| Leu Asn Glu Trp Leu Gly Asn Glu Asn Thr Glu Asp Gln Tyr Ser Leu |     |     |     |
|   | 275 | 280 | 285 |
| Val Glu Asp Asp Glu Asp Leu Pro His His Asp Glu Lys Thr Trp Asn |     |     |     |
|   | 290 | 295 | 300 |
| Val Gly Ser Ser Asn Arg Asn Lys Ala Glu Asn Leu Leu Arg Gly Lys |     |     |     |
| 305   | 310 | 315 | 320 |
| Arg Asp Gly Thr Phe Leu Val Arg Glu Ser Ser Lys Gln Gly Cys Tyr |     |     |     |
|   | 325 | 330 | 335 |
| Ala Cys Ser Val Val Val Asp Gly Glu Val Lys His Cys Val Ile Asn |     |     |     |
|   | 340 | 345 | 350 |
| Lys Thr Ala Thr Gly Tyr Gly Phe Ala Glu Pro Tyr Asn Leu Tyr Ser |     |     |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 355 |     | 360 |     | 365 |     |     |     |     |     |     |     |     |     |     |
| Ser | Leu | Lys | Glu | Leu | Val | Leu | His | Tyr | Gln | His | Thr | Ser | Leu | Val | Gln |
|     | 370 |     |     |     | 375 |     |     |     | 380 |     |     |     |     |     |     |
| His | Asn | Asp | Ser | Leu | Asn | Val | Thr | Leu | Ala | Tyr | Pro | Val | Tyr | Ala | Gln |
| 385 |     |     |     |     | 390 |     |     |     | 395 |     |     |     |     | 400 |     |
| Gln | Arg | Arg |     |     |     |     |     |     |     |     |     |     |     |     |     |

&lt;210&gt; 4227

&lt;211&gt; 369

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4227

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Trp | Glu | Glu | Thr | Gly | Ala | Ala | Pro | Ala | Pro | Ala | Arg | Ala | Ser |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Asp | Leu | Pro | Tyr | Arg | Ile | Ser | Ser | Asp | His | Leu | Lys | Lys | Glu | Glu | Lys |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Thr | Met | Met | Ala | His | Gln | Tyr | Pro | Ser | Trp | Ile | Phe | Ile | Asn | Glu |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Lys | Thr | Phe | Ile | Thr | Arg | Glu | Gln | Leu | Asn | Ser | Leu | Leu | Lys | Thr | Tyr |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Asn | Ile | Phe | Tyr | Glu | Asn | Gln | Lys | Asn | Leu | His | Ile | Leu | Tyr | Gly | Glu |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Thr | Glu | Asp | Gly | Lys | Leu | Ile | Val | Glu | Gly | Met | Leu | Asp | Ile | Phe | Trp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gly | Val | Lys | Arg | Pro | Ile | Gln | Leu | Lys | Ile | Gln | Asp | Glu | Lys | Pro | Phe |
|     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |     |
| Ser | Ser | Phe | Thr | Ser | Met | Lys | Ser | Ser | Asp | Val | Phe | Ser | Ser | Lys | Gly |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Met | Thr | Arg | Trp | Gly | Glu | Phe | Asp | Asp | Leu | Tyr | Arg | Ile | Ser | Glu | Leu |
|     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |
| Asp | Arg | Thr | Gln | Ile | Pro | Met | Ser | Glu | Lys | Arg | Asn | Ser | Gln | Glu | Asp |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |     |
| Tyr | Leu | Ser | Tyr | His | Ser | Asn | Thr | Leu | Lys | Pro | His | Ala | Lys | Asp | Glu |

|   |     |     |
|---|-----|-----|
| 165   | 170 | 175 |
| Pro Asp Ser Pro Val Leu Tyr Arg Thr Met Ser Glu Ala Ala Leu Val |     |     |
| 180   | 185 | 190 |
| Arg Lys Arg Met Lys Pro Leu Met Met Asp Arg Lys Glu Arg Gln Lys |     |     |
| 195   | 200 | 205 |
| Asn Arg Ala Ser Ile Asn Gly His Phe Tyr Asn His Glu Thr Ser Ile |     |     |
| 210   | 215 | 220 |
| Phe Ile Pro Ala Phe Glu Ser Glu Thr Lys Val Arg Val Asn Ser Asn |     |     |
| 225   | 230 | 235 |
| Met Arg Thr Glu Glu Val Ile Lys Gln Leu Leu Gln Lys Phe Lys Ile |     |     |
| 245   | 250 | 255 |
| Glu Asn Ser Pro Gln Asp Phe Ala Leu His Ile Ile Phe Ala Thr Gly |     |     |
| 260   | 265 | 270 |
| Glu Gln Arg Arg Leu Lys Lys Thr Asp Ile Pro Leu Leu Gln Arg Leu |     |     |
| 275   | 280 | 285 |
| Leu Gln Gly Pro Ser Glu Lys Asn Ala Arg Ile Phe Leu Met Asp Lys |     |     |
| 290   | 295 | 300 |
| Asp Ala Glu Glu Ile Ser Ser Asp Val Ala Gln Tyr Ile Asn Phe His |     |     |
| 305   | 310 | 315 |
| Phe Ser Leu Leu Glu Ser Ile Leu Gln Arg Leu Asn Glu Glu Glu Lys |     |     |
| 325   | 330 | 335 |
| Arg Glu Ile Gln Arg Ile Val Thr Lys Phe Asn Lys Glu Lys Ala Ile |     |     |
| 340   | 345 | 350 |
| Ile Leu Lys Cys Leu Gln Asn Lys Leu Val Ile Lys Thr Glu Thr Thr |     |     |
| 355   | 360 | 365 |
| Val   |     |     |

&lt;210&gt; 4228

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4228

Met Ala Trp Asp Ala Gly Ala Trp Val Glu Arg Arg Gly Pro Gln Ala



|                     |                                     |                     |             |
|---------------------|-------------------------------------|---------------------|-------------|
| 1                   | 5                                   | 10                  | 15          |
| Ala Ala Val         | Leu Pro Ile Gly His Thr             | Val Gln Gly Ala     | Ser Lys Ala |
| 20                  | 25                                  | 30                  |             |
| Thr Lys His Thr     | Pro Gln Pro Ser Gly Cys Leu Trp     | Leu Thr Thr Cys     |             |
| 35                  | 40                                  | 45                  |             |
| Leu Glu Thr Phe Thr | Leu Gly His Met Ile Phe             | Leu Pro Thr His Pro |             |
| 50                  | 55                                  | 60                  |             |
| Leu Pro Pro Pro Ser | Gly Arg Cys Gln Gln Arg Ala Pro Trp | Glu Pro             |             |
| 65                  | 70                                  | 75                  | 80          |
| Gly Leu Leu Val Glu | Ala Trp Leu Gly Arg Val Ser         | Leu Glu Trp         |             |
| 85                  | 90                                  | 95                  |             |
| Thr Asp Ala Leu Pro | Pro Leu Gln Ser Leu Thr Ala Ala Ala | Pro Ser             |             |
| 100                 | 105                                 | 110                 |             |
| Gln Met Gln Asn     |                                     |                     |             |
| 115                 |                                     |                     |             |

&lt;210&gt; 4229

&lt;211&gt; 325

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4229

|                         |   |    |    |
|-------------------------|---|----|----|
| Met Leu Cys Pro Trp     | Arg Thr Ala Asn Leu Gly Leu Leu Leu Ile Leu |    |    |
| 1                       | 5   | 10 | 15 |
| Thr Ile Phe Leu Val     | Ala Ala Ser Ser Ser Leu Cys Met Asp Glu Lys |    |    |
| 20                      | 25  | 30 |    |
| Gln Ile Thr Gln Asn Tyr | Ser Lys Val Leu Ala Glu Val Asn Thr Ser     |    |    |
| 35                      | 40  | 45 |    |
| Trp Pro Val Lys Met     | Ala Thr Asn Ala Val Leu Cys Cys Pro Pro Ile |    |    |
| 50                      | 55  | 60 |    |
| Ala Leu Arg Asn Leu Ile | Ile Ile Thr Trp Glu Ile Ile Leu Arg Gly     |    |    |
| 65                      | 70  | 75 | 80 |
| Gln Pro Ser Cys Thr     | Lys Ala Tyr Arg Lys Glu Thr Asn Glu Thr Lys |    |    |
| 85                      | 90  | 95 |    |
| Glu Thr Asn Cys Thr     | Asp Glu Arg Ile Thr Trp Val Ser Arg Pro Asp |    |    |

|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Gln Asn Ser Asp Leu Gln Ile Arg Pro Val Ala Ile Thr His Asp Gly |     |     |
| 115   | 120 | 125 |
| Tyr Tyr Arg Cys Ile Met Val Thr Pro Asp Gly Asn Phe His Arg Gly |     |     |
| 130   | 135 | 140 |
| Tyr His Leu Gln Val Leu Val Thr Pro Glu Val Thr Leu Phe Gln Asn |     |     |
| 145   | 150 | 155 |
| Arg Asn Arg Thr Ala Val Cys Lys Ala Val Ala Gly Lys Pro Ala Ala |     |     |
| 165   | 170 | 175 |
| Gln Ile Ser Trp Ile Pro Glu Gly Asp Cys Ala Thr Lys Gln Glu Tyr |     |     |
| 180   | 185 | 190 |
| Trp Ser Asn Gly Thr Val Thr Val Lys Ser Thr Cys His Trp Glu Val |     |     |
| 195   | 200 | 205 |
| His Asn Val Ser Thr Val Thr Cys His Val Ser His Leu Thr Gly Asn |     |     |
| 210   | 215 | 220 |
| Lys Ser Leu Tyr Ile Glu Leu Leu Pro Val Pro Gly Ala Lys Lys Ser |     |     |
| 225   | 230 | 235 |
| Ala Lys Leu Tyr Ile Pro Tyr Ile Ile Leu Thr Ile Ile Ile Leu Thr |     |     |
| 245   | 250 | 255 |
| Ile Val Gly Phe Ile Trp Leu Leu Lys Val Asn Gly Cys Arg Lys Tyr |     |     |
| 260   | 265 | 270 |
| Lys Leu Asn Lys Thr Glu Ser Thr Pro Val Val Glu Glu Asp Glu Met |     |     |
| 275   | 280 | 285 |
| Gln Pro Tyr Ala Ser Tyr Thr Glu Lys Asn Asn Pro Leu Tyr Asp Thr |     |     |
| 290   | 295 | 300 |
| Thr Asn Lys Val Lys Ala Ser Gln Ala Leu Gln Ser Glu Val Asp Thr |     |     |
| 305   | 310 | 315 |
| Asp Leu His Thr Leu   |     |     |
| 325   |     |     |

&lt;210&gt; 4230

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4230

Met His Ser Thr Gln Asp Lys Ser Leu His Leu Glu Gly Asp Pro Asn  
 1 5 10 15  
 Pro Ser Ala Ala Pro Thr Ser Thr Cys Ala Pro Arg Lys Met Pro Lys  
 20 25 30  
 Arg Ile Ser Ile Ser Lys Gln Leu Ala Ser Val Lys Ala Leu Arg Lys  
 35 40 45  
 Cys Ser Asp Leu Glu Lys Ala Ile Ala Thr Thr Ala Leu Ile Phe Arg  
 50 55 60  
 Asn Ser Ser Asp Ser Asp Gly Lys Leu Glu Lys Ala Ile Ala Lys Asp  
 65 70 75 80  
 Leu Leu Gln Thr Gln Phe Arg Asn Phe Ala Glu Pro Cys Glu Asp Ser  
 85 90 95  
 Arg Arg Ser Trp Pro Ser Ala Lys Leu Glu Glu Ser Thr Leu Ser Arg  
 100 105 110  
 His Trp Ile  
 115

&lt;210&gt; 4231

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4231

Met Ala Ala Leu Ile Cys Pro Ala Ser Pro Gln His Phe Pro Phe Leu  
 1 5 10 15  
 His Ser Phe Trp Asp Pro Thr Trp Leu Leu Ser His Leu Ala Thr Ser  
 20 25 30  
 Gln Thr His Leu Pro Met Gly Thr Ser Arg Ser Ala Pro Gly Pro Val  
 35 40 45  
 Leu Ser Ser Ser Leu His Ser Pro Arg Cys Leu Leu Leu Val Phe  
 50 55 60  
 Asn Thr Thr Tyr Gly His Arg Ala Ile Gly Trp His Thr Ser Ala Phe

65                      70                      75                      80  
 Ser Pro Asp Cys Ser Leu Glu Leu Arg Ile Leu Phe Ser Asn Ala Phe  
                             85                      90                      95  
 Leu Thr Leu Ala His Arg Gln Leu Ile Arg Leu Leu Lys Leu Asp Ile  
                             100                      105                      110  
 Val Lys Thr Leu Ser Cys Ser Pro Phe Gln Ala Phe Leu Ser Leu Pro  
                             115                      120                      125  
 Pro Ile Asn Ser Thr Ser Val Leu Ala Ala Asp Pro Ala Lys Asp Leu  
                             130                      135                      140  
 Gly Val Ser Leu Phe Pro Pro Phe Pro Arg Ser  
 145                      150                      155

<210> 4232

<211> 490

<212> PRT

<213> Homo sapiens

<400> 4232

Met Asp Leu Met Cys Lys Lys Met Lys His Leu Trp Phe Phe Leu Leu  
   1                      5                      10                      15  
 Leu Val Ala Ala Pro Gly Trp Val Leu Ser Gln Leu Gln Leu Gln Glu  
                             20                      25                      30  
 Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser Leu Thr Cys  
                             35                      40                      45  
 Ser Val Ser Gly Ala Ser Met Thr Thr Ser Glu Tyr Tyr Trp Ala Trp  
                             50                      55                      60  
 Ile Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Asn Ile Phe  
   65                      70                      75                      80  
 Tyr Thr Gly Arg Thr Phe Tyr Asn Pro Ser Leu Lys Ser Arg Leu Ser  
                             85                      90                      95  
 Leu Ser Ile Asp Thr Ala Thr Ser Gln Phe Ser Leu Ser Leu Arg Ser  
                             100                      105                      110  
 Val Thr Ala Ala Asp Thr Ala Ile Tyr Phe Cys Ala Arg His Leu Asn  
                             115                      120                      125  
 Thr Val Thr Ile Tyr Arg Gln Pro Phe Asp His Trp Gly Gln Gly Ala

|   |     |     |     |
|---|-----|-----|-----|
| 130   | 135 | 140 |     |
| Leu Val Thr Val Ser Ser Ala Ser Pro Thr Ser Pro Lys Val Phe Pro |     |     |     |
| 145   | 150 | 155 | 160 |
| Leu Ser Leu Asp Ser Thr Pro Gln Asp Gly Asn Val Val Val Ala Cys |     |     |     |
| 165   | 170 | 175 |     |
| Leu Val Gln Gly Phe Phe Pro Gln Glu Pro Leu Ser Val Thr Trp Ser |     |     |     |
| 180   | 185 | 190 |     |
| Glu Ser Gly Gln Asn Val Thr Ala Arg Asn Phe Pro Pro Ser Gln Asp |     |     |     |
| 195   | 200 | 205 |     |
| Ala Ser Gly Asp Leu Tyr Thr Thr Ser Ser Gln Leu Thr Leu Pro Ala |     |     |     |
| 210   | 215 | 220 |     |
| Thr Gln Cys Pro Asp Gly Lys Ser Val Thr Cys His Val Lys His Tyr |     |     |     |
| 225   | 230 | 235 | 240 |
| Thr Asn Pro Ser Gln Asp Val Thr Val Pro Cys Pro Val Pro Pro Pro |     |     |     |
| 245   | 250 | 255 |     |
| Pro Pro Cys Cys His Pro Arg Leu Ser Leu His Arg Pro Ala Leu Glu |     |     |     |
| 260   | 265 | 270 |     |
| Asp Leu Leu Leu Gly Ser Glu Ala Asn Leu Thr Cys Thr Leu Thr Gly |     |     |     |
| 275   | 280 | 285 |     |
| Leu Arg Asp Ala Ser Gly Ala Thr Phe Thr Trp Thr Pro Ser Ser Gly |     |     |     |
| 290   | 295 | 300 |     |
| Lys Ser Ala Val Gln Gly Pro Pro Glu Arg Asp Leu Cys Gly Cys Tyr |     |     |     |
| 305   | 310 | 315 | 320 |
| Ser Val Ser Ser Val Leu Pro Gly Cys Ala Gln Pro Trp Asn His Gly |     |     |     |
| 325   | 330 | 335 |     |
| Glu Thr Phe Thr Cys Thr Ala Ala His Pro Glu Leu Lys Thr Pro Leu |     |     |     |
| 340   | 345 | 350 |     |
| Thr Ala Asn Ile Thr Lys Ser Gly Asn Thr Phe Arg Pro Glu Val His |     |     |     |
| 355   | 360 | 365 |     |
| Leu Leu Pro Pro Pro Ser Glu Glu Leu Ala Leu Asn Glu Leu Val Thr |     |     |     |
| 370   | 375 | 380 |     |
| Leu Thr Cys Leu Ala Arg Gly Phe Ser Pro Lys Asp Val Leu Val Arg |     |     |     |
| 385   | 390 | 395 | 400 |
| Trp Leu Gln Gly Ser Gln Glu Leu Pro Arg Glu Lys Tyr Leu Thr Trp |     |     |     |
| 405   | 410 | 415 |     |
| Ala Ser Arg Gln Glu Pro Ser Gln Gly Thr Thr Thr Phe Ala Val Thr |     |     |     |

420                      425                      430  
 Ser Ile Leu Arg Val Ala Ala Glu Asp Trp Lys Lys Gly Asp Thr Phe  
 435                      440                      445  
 Ser Cys Met Val Gly His Glu Ala Leu Pro Leu Ala Phe Thr Gln Lys  
 450                      455                      460  
 Thr Ile Asp Arg Leu Ala Gly Lys Pro Thr His Val Asn Val Ser Val  
 465                      470                      475                      480  
 Val Met Ala Glu Val Asp Gly Thr Cys Tyr  
 485                      490

<210> 4233

<211> 1543

<212> PRT

<213> Homo sapiens

<400> 4233

Met Leu Glu Thr Gly Tyr Val Ile Thr Asp Gln Thr Arg Asp Glu Met  
 1                      5                      10                      15  
 Ser Ile Glu Ser Phe Leu Gly Arg Ser Ser Cys Ile Ala Glu Ile His  
 20                      25                      30  
 Thr Asp Leu Asp His Thr Gly Tyr Asn Glu Pro Arg Lys Asn His Ser  
 35                      40                      45  
 Glu Trp Lys Ile Thr Leu Lys Glu Met Ala Gln Ile Arg Arg Lys Cys  
 50                      55                      60  
 Glu Met Phe Thr Tyr Leu Arg Phe Asp Ser Glu Ile Thr Ile Val Val  
 65                      70                      75                      80  
 Ser Val Ala Ser Lys Gln Gly Asp Asn Gly His Val Val Ile Gln Tyr  
 85                      90                      95  
 Met Tyr Val Pro Pro Gly Ala Pro Ile Pro Lys Thr Arg Asp Asp Tyr  
 100                      105                      110  
 Thr Trp Gln Ser Gly Thr Asn Ala Ser Val Phe Trp Gln Gln Gly Gln  
 115                      120                      125  
 Pro Tyr Pro Arg Phe Thr Ile Pro Phe Met Ser Ile Ala Ser Ala Tyr  
 130                      135                      140  
 Tyr Met Phe Tyr Asp Gly Tyr Glu Asp Asp Asn Gly Thr Thr Tyr Gly

|   |     |     |     |
|---|-----|-----|-----|
| 145   | 150 | 155 | 160 |
| Ala Ala Val Thr Asn Asp Met Gly Thr Leu Cys Val Arg Ile Val Thr |     |     |     |
|   | 165 | 170 | 175 |
| Glu Gln Gln Lys Asn Glu Val Lys Ile Thr Ser Arg Val Tyr His Lys |     |     |     |
|   | 180 | 185 | 190 |
| Ala Lys His Ile Ser Ala Trp Cys Pro Arg Pro Pro Arg Ala Val Ala |     |     |     |
|   | 195 | 200 | 205 |
| Tyr Gln His Thr Tyr Ser Pro Asn Phe Val Pro Pro Thr Gly Ala Val |     |     |     |
|   | 210 | 215 | 220 |
| Gln Thr His Ile Lys Phe Arg Pro Asn Val Lys Asp Val Thr Ser Val |     |     |     |
| 225   | 230 | 235 | 240 |
| Met Thr Ala Gly Pro Ser Asp Leu Tyr Val His Ser Ser Asn Phe Ile |     |     |     |
|   | 245 | 250 | 255 |
| Tyr Arg Asn Leu His Leu Cys Glu Pro Glu Asn Leu Asn Asp Ser Val |     |     |     |
|   | 260 | 265 | 270 |
| Leu Ile Ser Tyr Ser Ser Asp Leu Val Ile Tyr Arg Thr Asn Thr Thr |     |     |     |
|   | 275 | 280 | 285 |
| Gly Asp Asp Ile Ile Pro Thr Cys Asp Cys Thr Leu Gly Thr Tyr Tyr |     |     |     |
|   | 290 | 295 | 300 |
| Cys Lys His Lys Asp Arg Tyr Tyr Pro Ile Ser Val Thr Lys His Gln |     |     |     |
| 305   | 310 | 315 | 320 |
| Trp Tyr Glu Ile Gln Glu Ser Asp Tyr Tyr Pro Lys His Ile Gln Tyr |     |     |     |
|   | 325 | 330 | 335 |
| Asn Ile Leu Leu Gly Val Gly Pro Cys Lys Pro Gly Asp Cys Gly Gly |     |     |     |
|   | 340 | 345 | 350 |
| Lys Leu Leu Cys Lys His Gly Val Ile Gly Ile Ile Thr Ala Gly Gly |     |     |     |
|   | 355 | 360 | 365 |
| Asp Asn His Val Ala Phe Ile Asp Leu Arg Asp Phe Gln Val Ala Glu |     |     |     |
|   | 370 | 375 | 380 |
| Glu Gln Gly Ile Pro Glu Tyr Ile His Ser Leu Gly Glu Ala Phe Gly |     |     |     |
| 385   | 390 | 395 | 400 |
| Ser Gly Phe Val Asp Asn Ile Lys Asp Gln Ile Gln Thr Ile Asn Pro |     |     |     |
|   | 405 | 410 | 415 |
| Ile Asn Lys Ile Ser Ser Lys Ile Val Lys Trp Val Ile Arg Ile Ile |     |     |     |
|   | 420 | 425 | 430 |
| Ser Ala Ile Thr Ile Ile Ile Arg Asn Asn Ala Asp Pro His Thr Ile |     |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 435   | 440 | 445 |     |
| Ile Ala Thr Leu Ala Leu Leu Gly Cys Ser Gly Ser Pro Trp Arg Phe |     |     |     |
| 450   | 455 | 460 |     |
| Ile Lys Glu Lys Val Cys Gly Trp Leu Gln Leu Asn Tyr Ile His Lys |     |     |     |
| 465   | 470 | 475 | 480 |
| Glu Ser Asp Gly Trp Ile Lys Lys Phe Thr Glu Met Cys Asn Ala Ala |     |     |     |
|   | 485 | 490 | 495 |
| Arg Gly Leu Glu Trp Leu Gly Asn Lys Ile Ser Lys Phe Ile Asp Trp |     |     |     |
| 500   | 505 | 510 |     |
| Leu Lys Ser Met Leu Pro Gln Ala Arg Leu Lys Val Asp Phe Ile Lys |     |     |     |
| 515   | 520 | 525 |     |
| Asn Leu Lys Gln Leu Pro Leu Leu Glu Lys Gln Val Asp Gly Leu Arg |     |     |     |
| 530   | 535 | 540 |     |
| Leu Ala Thr Gln Lys Gln Gln Gln Glu Tyr Ile Asp Thr Leu Thr Leu |     |     |     |
| 545   | 550 | 555 | 560 |
| Met Leu Asp Ser Ser Asn Lys Phe Leu Pro Leu Tyr Ala Leu Glu Asn |     |     |     |
|   | 565 | 570 | 575 |
| Lys Arg Ile Lys Glu Leu Leu Lys Arg Gly Gln Met Ile Leu Arg Thr |     |     |     |
| 580   | 585 | 590 |     |
| Ser Lys Arg Thr Glu Pro Val Gly Val Ile Phe His Gly Glu Pro Gly |     |     |     |
| 595   | 600 | 605 |     |
| Thr Gly Lys Ser Ile Thr Thr Ser Ile Leu Ala Arg Met Leu Thr Ser |     |     |     |
| 610   | 615 | 620 |     |
| Glu Ser Asp Ile Tyr Ser Leu Pro Pro Ser Pro Lys Tyr Phe Asp Gly |     |     |     |
| 625   | 630 | 635 | 640 |
| Tyr Asp Gln Gln Ser Val Val Ile Met Asp Asp Ile Met Gln Asn Pro |     |     |     |
|   | 645 | 650 | 655 |
| Ser Gly Glu Asp Met Ser Leu Phe Cys Gln Met Val Ser Ser Val Pro |     |     |     |
| 660   | 665 | 670 |     |
| Phe Ile Pro Pro Met Ala Asp Leu Pro Asp Lys Gly Lys Pro Phe Ser |     |     |     |
| 675   | 680 | 685 |     |
| Ser Asp Tyr Val Leu Ala Ser Thr Asn His Thr Leu Leu His Pro Pro |     |     |     |
| 690   | 695 | 700 |     |
| Thr Ile Thr Cys Thr Thr Ala Met Asn Arg Arg Phe Phe Leu Asp Leu |     |     |     |
| 705   | 710 | 715 | 720 |
| Asp Ile Ile Val Lys Asp Asp Tyr Lys Leu Gly Gln Gly Lys Leu Asn |     |     |     |



|   |      |      |
|---|------|------|
| 725   | 730  | 735  |
| Leu Gln Cys Ala Leu Lys Pro Cys Lys Glu Gly Lys Ile Gly Asn Ala |      |      |
| 740   | 745  | 750  |
| Lys Cys Cys Pro Leu Ile Cys Gly Lys Ala Leu Gln Phe Arg Asp Arg |      |      |
| 755   | 760  | 765  |
| Ser Asn Gly Glu His Leu Ser Leu Ala Thr Ile Tyr Asn Arg Ile Thr |      |      |
| 770   | 775  | 780  |
| Gln Glu Ser Lys Asn Arg Lys Glu Leu Thr Asn Ser Leu Gln Ala Ile |      |      |
| 785   | 790  | 795  |
| Phe Gln Gly Pro Ile Asp Ile Val Asn Lys Pro Pro Pro Pro Ala Ile |      |      |
| 805   | 810  | 815  |
| Val Asp Leu Leu Lys Ser Val Arg Ser Pro Asp Val Ile Arg Tyr Cys |      |      |
| 820   | 825  | 830  |
| Glu Glu Asn Lys Trp Ile Ile Pro Ala Asp Cys Arg Leu Glu Arg Asp |      |      |
| 835   | 840  | 845  |
| Leu Asn Tyr Ala Asn Val Ile Ile Ser Met Ile Ala Asn Val Ile Ser |      |      |
| 850   | 855  | 860  |
| Ile Met Gly Val Ile Tyr Ile Ile Tyr Lys Leu Phe Cys Ser Leu Gln |      |      |
| 865   | 870  | 875  |
| Gly Pro Tyr Ser Gly Glu Pro Lys Pro Val Thr Arg Lys Pro Glu Arg |      |      |
| 885   | 890  | 895  |
| Arg Val Val Thr Gln Gly Pro Gln Glu Glu Phe Gly Arg Ser Leu Met |      |      |
| 900   | 905  | 910  |
| Lys His Asn Thr Cys Val Val Thr Thr Asn Asn Gly Lys Phe Thr Gly |      |      |
| 915   | 920  | 925  |
| Leu Gly Ile Tyr Asp Asn Val Met Ile Ile Pro Thr His Ala Asp Ala |      |      |
| 930   | 935  | 940  |
| Gly Gln Glu Val Glu Val Asp Gly Ile Lys Thr Lys Val Ser Asp Ala |      |      |
| 945   | 950  | 955  |
| Tyr Asp Leu Tyr Asn Thr Gln Gly Val Lys Leu Glu Ile Thr Val Leu |      |      |
| 965   | 970  | 975  |
| Lys Leu Asn Arg Asn Glu Lys Phe Arg Asp Ile Arg Lys Tyr Ile Pro |      |      |
| 980   | 985  | 990  |
| Glu Ser Glu Asp Asp Tyr Ser Glu Cys Cys Leu Ala Leu Val Ala Asn |      |      |
| 995   | 1000 | 1005 |

Gln Val Glu Pro Thr Ile Leu Glu Val Gly Asp Cys Cys Ser Tyr Gly  
 1010 1015 1020  
 Asn Ile Leu Leu Ser Gly Asn Gln Thr Ala Arg Met Ile Lys Tyr Asn  
 1025 1030 1035 1040  
 Tyr Pro Thr Lys Ser Gly Phe Cys Gly Gly Val Leu Tyr Lys Ile Gly  
 1045 1050 1055  
 Leu Ile Leu Gly Ile His Val Gly Gly Asn Gly Arg Asp Gly Phe Ser  
 1060 1065 1070  
 Ala Met Leu Leu Arg Ser Tyr Phe Asn Glu Gln Gln Gly Lys Ile Val  
 1075 1080 1085  
 Ser Lys Ala Asp Val Lys Glu His Asn Leu Tyr Ser Ile His Thr Pro  
 1090 1095 1100  
 Thr Lys Thr Lys Leu Gln Pro Ser Val Phe His Asp Val Phe Pro Gly  
 1105 1110 1115 1120  
 Ser Lys Glu Pro Ala Val Leu Ser Thr Arg Asp Pro Arg Leu Glu Val  
 1125 1130 1135  
 Asp Leu Asp Ser Ser Ile Phe Ser Lys Tyr Lys Gly Asn Glu Ala Val  
 1140 1145 1150  
 Lys Ile Ser Glu Asn Met Leu Val Ala Ala Ala His Tyr Thr Ala Gln  
 1155 1160 1165  
 Leu Thr Thr Leu Asp Ile Asp Pro Gln Pro Ile Ser Leu Glu Asp Ser  
 1170 1175 1180  
 Val Tyr Gly Ile Glu Gly Leu Glu Ala Leu Asp Leu His Thr Ser Ala  
 1185 1190 1195 1200  
 Gly Tyr Pro Tyr Thr Ala His Gly Ile Lys Lys Lys Asp Leu Ile Pro  
 1205 1210 1215  
 Lys Asp Lys Asn Leu Thr Lys Leu Lys Ile Ala Met Glu Lys Tyr Gly  
 1220 1225 1230  
 Leu Asp Leu Pro Met Ile Thr Phe Leu Lys Asp Glu Leu Arg Lys Pro  
 1235 1240 1245  
 Glu Lys Ile Ser Thr Gly Lys Thr Arg Ile Ile Glu Ala Ser Ser Leu  
 1250 1255 1260  
 Asn Asp Thr Val Gln Phe Arg Met Ala Phe Gly Asn Leu Phe Ser Lys  
 1265 1270 1275 1280  
 Phe His Lys Asn Pro Gly Ile Val Thr Gly Ser Ala Val Gly Cys Asp  
 1285 1290 1295

|   |      |      |      |
|---|------|------|------|
| Pro Glu Val Phe Trp Ser Lys Ile Pro Val Met Leu Asp Gly Asp Cys |      |      |      |
| 1300  | 1305 | 1310 |      |
| Leu Met Ala Phe Asp Tyr Ser Asn Tyr Asp Gly Ser Leu Asn Pro Val |      |      |      |
| 1315  | 1320 | 1325 |      |
| Trp Phe Glu Leu Leu Glu Arg Val Leu Asn Asp Leu Gly Phe Pro Gly |      |      |      |
| 1330  | 1335 | 1340 |      |
| Lys Leu Val Asn Lys Leu Cys His Ser Lys His Ile Tyr Lys Thr Thr |      |      |      |
| 1345  | 1350 | 1355 | 1360 |
| Tyr Tyr Glu Val Glu Gly Gly Met Pro Ser Gly Cys Ala Gly Thr Ser |      |      |      |
| 1365  | 1370 | 1375 |      |
| Ile Phe Asn Ser Met Ile Asn Asn Ile Ile Ile Arg Thr Leu Val Leu |      |      |      |
| 1380  | 1385 | 1390 |      |
| Asp Thr Tyr Lys Tyr Ile Asn Leu Asp Lys Leu Lys Ile Leu Ala Tyr |      |      |      |
| 1395  | 1400 | 1405 |      |
| Gly Asp Asp Val Leu Phe Ser Tyr Pro Tyr Asp Leu Asp Met Ala Glu |      |      |      |
| 1410  | 1415 | 1420 |      |
| Leu Ala Lys Glu Gly Asn Lys Tyr Gly Leu Thr Ile Thr Pro Ala Asp |      |      |      |
| 1425  | 1430 | 1435 | 1440 |
| Lys Ser Asp Lys Phe Glu Lys Leu Asn Tyr Glu Asn Ala Thr Phe Leu |      |      |      |
| 1445  | 1450 | 1455 |      |
| Lys Arg Gly Phe Lys Gln Asp Asp Arg Tyr Lys Phe Leu Ile His Pro |      |      |      |
| 1460  | 1465 | 1470 |      |
| Ile Tyr Pro Glu Ser Glu Val Trp Glu Ser Ile Arg Trp Thr Lys Ser |      |      |      |
| 1475  | 1480 | 1485 |      |
| Pro Arg Asn Met Gln Glu His Val Leu Ser Leu Cys His Leu Met Trp |      |      |      |
| 1490  | 1495 | 1500 |      |
| His Asn Gly Lys Asp Lys Tyr Asp Ser Phe Val Asn Lys Ile Arg Ser |      |      |      |
| 1505  | 1510 | 1515 | 1520 |
| Val Ser Ala Gly Arg Ala Leu Tyr Ile Pro Pro Tyr Glu Leu Leu Leu |      |      |      |
| 1525  | 1530 | 1535 |      |
| His Glu Trp Tyr Glu Lys Phe                                     |      |      |      |
| 1540  |      |      |      |

&lt;210&gt; 4234

&lt;211&gt; 366

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4234

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Met Gln Ser Val Gln Lys Met Phe Lys Cys His Pro Asp Glu Val Met
  1              5              10              15
Ser Ile Arg Thr Thr Asn Arg Glu Tyr Phe Leu Ile Gly His Asp Arg
      20              25              30
Glu Lys Ile Lys Asp Trp Val Ser Phe Met Ser Ser Phe Arg Gln Asp
      35              40              45
Ile Lys Ala Thr Gln Gln Asn Thr Glu Glu Glu Leu Ser Leu Gly Asn
      50              55              60
Lys Arg Thr Leu Phe Tyr Ser Ser Pro Leu Leu Gly Pro Ser Ser Thr
      65              70              75              80
Ser Glu Ala Val Gly Ser Ser Ser Pro Arg Asn Gly Leu Gln Asp Lys
      85              90              95
His Leu Met Glu Gln Ser Ser Pro Gly Phe Arg Gln Thr His Leu Gln
      100             105             110
Asp Leu Ser Glu Ala Thr Gln Asp Val Lys Glu Glu Asn His Tyr Leu
      115             120             125
Thr Pro Arg Ser Val Leu Leu Glu Leu Asp Asn Ile Ile Ala Ser Ser
      130             135             140
Asp Ser Gly Glu Ser Ile Glu Thr Asp Gly Pro Asp Gln Val Ser Gly
      145             150             155             160
Arg Ile Glu Cys His Tyr Glu Pro Met Glu Ser Tyr Phe Phe Lys Glu
      165             170             175
Thr Ser His Glu Ser Val Asp Ser Ser Lys Glu Glu Pro Gln Thr Leu
      180             185             190
Pro Glu Thr Gln Asp Gly Asp Leu His Leu Gln Glu Gln Gly Ser Gly
      195             200             205
Ile Asp Trp Cys Leu Ser Pro Ala Asp Val Glu Ala Gln Thr Thr Asn
      210             215             220
Asp Gln Lys Gly Asn Ile Pro Asp Glu Ser Gln Val Glu Lys Leu Asn
      225             230             235             240
Val Phe Leu Ser Pro Pro Asp Val Ile Asn Tyr Leu Ala Leu Thr Glu
      245             250             255

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Ala Thr Gly Arg Ile Cys Val Ser Gln Trp Glu Gly Pro Pro Arg Leu  
                   260                                  265                                  270  
 Gly Cys Ile Phe Cys His Gly Asp His Leu Leu Ala Val Asn Asp Leu  
                   275                                  280                                  285  
 Lys Pro Gln Ser Leu Glu Glu Val Ser Leu Phe Leu Thr Arg Ser Ile  
                   290                                  295                                  300  
 Gln Lys Glu Lys Leu Lys Leu Thr Ile Gly Arg Ile Pro Asn Ser Glu  
 305                                  310                                  315                                  320  
 Thr Phe His Ala Ala Ser Cys Met Cys Pro Ser Lys Cys Gln Ser Ala  
                                   325                                  330                                  335  
 Ala Pro Ser Gln Leu Asp Lys Pro Arg Leu Asn Arg Ala Pro Lys Arg  
                   340                                  345                                  350  
 Ser Pro Ala Ile Lys Lys Ser Gln Gln Lys Gly Ala Arg Glu  
                   355                                  360                                  365

<210> 4235

<211> 213

<212> PRT

<213> Homo sapiens

<400> 4235

Met Lys Pro Pro Met Ser Trp Trp Lys Ala Tyr Leu Leu Ser Ile Ser  
   1                                  5                                  10                                  15  
 His Ala Lys Lys Ala Gly Thr Cys Ile His Phe Ser Lys Arg Glu Asn  
                   20                                  25                                  30  
 Glu Ile Gln Arg Ser Ile Val Thr Cys Pro Lys Ser His Ser Trp His  
                   35                                  40                                  45  
 Ser Asp Pro Asn Leu Ser Lys Ser Lys Ala Trp Val Leu Pro Leu Gln  
                   50                                  55                                  60  
 Arg Gly Gln Pro Gln Pro Ala Phe Leu His Arg Leu Arg Gln Arg Tyr  
                   65                                  70                                  75                                  80  
 Met Leu Cys Pro Leu Arg Ala Leu Leu Leu Gln Thr Tyr Phe Val Lys  
                                   85                                  90                                  95  
 Met Ala Gln Pro Gly Cys Leu Gly Asp Arg Lys Pro His Asn Gly Arg  
                   100                                  105                                  110

Thr Lys Glu Gly Ala Val Gly Leu Ser Thr Ser Ile Lys Thr Asn Arg  
 115 120 125  
 Pro Thr Arg Ser Thr Arg Leu Pro Ser Thr Ala Asp Leu Glu Ile Lys  
 130 135 140  
 Ser Phe Arg Arg Ala Leu Leu Ser Leu Ser Ile Arg Tyr Lys Ile Ser  
 145 150 155 160  
 Ser Pro Leu Ser Cys Trp Gly Tyr Leu Asp Ser Leu Ser Phe Ser Gly  
 165 170 175  
 Val Pro Val Tyr Lys Thr Pro Glu Arg Ala Gln Trp Leu Thr Pro Ile  
 180 185 190  
 Ile Pro Ala Leu Trp Glu Ala Lys Ala Gly Arg Ser Pro Glu Ala Gly  
 195 200 205  
 Ser Ser Arg Ser Ala  
 210

<210> 4236

<211> 125

<212> PRT

<213> Homo sapiens

<400> 4236

Met Glu Thr Trp Gly Gly Arg Lys Leu Ser Arg Asp Thr Val Pro Pro  
 1 5 10 15  
 Cys Ile Thr Glu Met Pro Gly Gln Ser Asp Leu Pro Gln Glu Ala Ser  
 20 25 30  
 Pro Ala Ala Pro Val Pro Glu Met Ser Gly Glu Arg Ala Ser Arg Glu  
 35 40 45  
 Ala Gly Ala Trp Ala Lys Arg Gly Ala Thr Gln Phe Phe Gln Asn Ile  
 50 55 60  
 Pro Val Trp Pro Met Asp Thr Gly Leu Leu Met Ser Arg Glu Gly Leu  
 65 70 75 80  
 Leu Ser Ser Ser Arg Thr Phe Gln Cys Gly Pro Trp Thr Pro Ala Phe  
 85 90 95  
 Trp Gly Pro Phe Cys Pro Val Ser Leu Gln Leu Met Ser Cys Leu Arg  
 100 105 110

Pro Glu Leu Pro Lys Ser Arg Thr Ala His Tyr Leu Leu  
 115 120 125

<210> 4237

<211> 331

<212> PRT

<213> Homo sapiens

<400> 4237

Met Ile Arg Lys Asn Asn Tyr Thr Leu Pro Ser Arg Ile Ser Phe Phe  
 1 5 10 15  
 Cys Ser Leu Pro Thr Phe Cys Ser Asn His Ile Asn Lys Ser Cys Phe  
 20 25 30  
 Phe Phe Ala Val Cys Ile Ala Ser Gly Thr Lys Val Ala Leu Phe Asn  
 35 40 45  
 Arg Leu Arg Ser Gln Thr Val Ser Thr Arg Tyr Leu His Val Glu Gly  
 50 55 60  
 Gly Asn Phe His Ala Ser Ser Gln Gln Trp Gly Ala Phe Phe Ile His  
 65 70 75 80  
 Leu Leu Asp Asp Asp Glu Ser Glu Gly Glu Glu Phe Thr Val Arg Asp  
 85 90 95  
 Gly Tyr Ile His Tyr Gly Gln Thr Val Lys Leu Val Cys Ser Val Thr  
 100 105 110  
 Gly Met Ala Leu Pro Arg Leu Ile Ile Arg Lys Val Asp Lys Gln Thr  
 115 120 125  
 Ala Leu Leu Asp Ala Asp Asp Pro Val Ser Gln Leu His Lys Cys Ala  
 130 135 140  
 Phe Tyr Leu Lys Asp Thr Glu Arg Met Tyr Leu Cys Leu Ser Gln Glu  
 145 150 155 160  
 Arg Ile Ile Gln Phe Gln Ala Thr Pro Cys Pro Lys Glu Pro Asn Lys  
 165 170 175  
 Glu Met Ile Asn Asp Gly Ala Ser Trp Thr Ile Ile Ser Thr Asp Lys  
 180 185 190  
 Leu Asn Gly Gly Gly Asp Val Ala Met Leu Glu Leu Thr Gly Gln Asn

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Phe Thr Pro Asn Leu Arg Val Trp Phe Gly Asp Val Glu Ala Glu Thr |     |     |
| 210   | 215 | 220 |
| Met Tyr Arg Cys Gly Glu Ser Met Leu Cys Val Val Pro Asp Ile Ser |     |     |
| 225   | 230 | 235 |
| Ala Phe Arg Glu Gly Trp Arg Trp Val Arg Gln Pro Val Gln Val Pro |     |     |
| 245   | 250 | 255 |
| Val Thr Leu Val Arg Asn Asp Gly Ile Ile Tyr Ser Thr Ser Leu Thr |     |     |
| 260   | 265 | 270 |
| Phe Thr Tyr Thr Pro Glu Pro Gly Pro Arg Pro His Cys Ser Ala Ala |     |     |
| 275   | 280 | 285 |
| Gly Ala Ile Leu Arg Ala Asn Ser Ser Gln Val Pro Pro Asn Glu Ser |     |     |
| 290   | 295 | 300 |
| Asn Thr Asn Ser Glu Gly Ser Tyr Thr Asn Ala Ser Thr Asn Ser Thr |     |     |
| 305   | 310 | 315 |
| Ser Val Thr Ser Ser Thr Ala Thr Val Val Ser                     |     |     |
| 325   | 330 |     |

&lt;210&gt; 4238

&lt;211&gt; 298

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4238

|   |
|---|
| Met Leu Leu Gly Ser Val Glu Gly Gln Ala Gly Ala Arg Gln Leu Ser |
| 1 5 10 15   |
| Ser Leu Ala Asn Gly Ala Thr Glu Asp Ser Lys Gln Asp Leu Cys Ser |
| 20 25 30  |
| Arg Leu His Cys Leu Trp Val Glu Pro Arg Glu Ile Asp Asn Ile Arg |
| 35 40 45  |
| Pro Phe Arg Ala Lys Thr Asn Ala Ser Phe Ala Gly Cys Ser Leu Thr |
| 50 55 60  |
| Glu Arg Leu Leu Gly Gly Leu Cys Arg Gly Trp Met Ser Arg Gly His |
| 65 70 75 80   |
| Pro Pro Glu Pro Ala Trp Gly Pro Gly Ser Glu Ala Ile Gly Pro Val |



|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 85  |     | 90  |     | 95  |
| Val Ser Arg Phe Ser Cys Arg Leu Gly Glu Arg Gly Gly Ser Arg Asn |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |
| Thr Glu Glu Val Lys Arg Gln Ser Arg Gly Asp Gly Val Pro Gln Arg |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |
| Arg Arg Ser Thr Glu Ala Glu Val Gln Ala Cys Arg His Val Asp His |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |
| Glu Tyr Ser Ala Arg Ser Val Gly Val Ser Ser Glu Leu His Gln Phe |     |     |     |     |     |
| 145   |     | 150 |     | 155 | 160 |
| Pro Gly Tyr Leu Gly Pro Trp Ile Thr Leu Arg Ser Ala Thr Cys Gln |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |
| Leu Ile Ser Lys Leu Leu Leu Ala Gly Leu Arg Leu Ser Arg Glu His |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Leu Gly Glu Pro Cys Ala Ala Gly Trp Thr Pro Ala His Leu Ala Asp |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |
| Tyr Ser Cys Phe Cys Ser Pro Val Cys Pro Gln Glu Val Arg Ala Cys |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |
| Leu Leu Phe Leu His Asp His Gly Arg Arg Gly Thr Asn Met Arg Val |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Leu Ala Ser Pro Gln Trp Trp Leu Pro Arg Ala Gly Glu Thr Leu Gly |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Glu Gly Leu Gly Gln Gly Pro Leu Ser Leu Ala Ala Thr Ala Trp Val |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Asn Cys Leu Ala Gly Leu Ala Ala Arg Ala Gln Lys Ala Glu Ala Leu |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Pro Ala Phe Ser Ser His Pro Ala Pro Met                         |     |     |     |     |     |
|   | 290 |     | 295 |     |     |

&lt;210&gt; 4239

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4239

Met Asp Leu Gly Leu Tyr Trp Val Phe Leu Val Ala Ile Leu Glu Gly

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Val Glu Cys Glu Val Gln Leu Glu Gln Ser Gly Gly Gly Leu Val Lys |     |     |     |
| 20  | 25  | 30  |     |
| Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Ser Leu |     |     |     |
| 35  | 40  | 45  |     |
| Ser Pro Tyr Glu Val Asn Trp Val Arg Arg Ala Pro Gly Lys Gly Leu |     |     |     |
| 50  | 55  | 60  |     |
| Glu Trp Ile Ala Tyr Ile Ser Ser Ser Gly Ser Lys Arg Tyr Tyr Gly |     |     |     |
| 65  | 70  | 75  | 80  |
| Asp Ser Val Thr Gly Arg Val Ser Ile Ser Arg Asp Ser Ala Gln Asn |     |     |     |
| 85  | 90  | 95  |     |
| Ser Val Ser Leu Gln Met Ser Gly Leu Arg Val Glu Asp Thr Gly Val |     |     |     |
| 100   | 105 | 110 |     |
| Tyr Tyr Cys Ala Arg Val Asp Trp Asn His Phe Tyr Phe Phe Met Asp |     |     |     |
| 115   | 120 | 125 |     |
| Val Trp Gly Lys Gly Thr Thr Val Ile Val Ser Ala Ala Ser Thr Lys |     |     |     |
| 130   | 135 | 140 |     |
| Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg Ser Thr Ser Gly |     |     |     |
| 145   | 150 | 155 | 160 |
| Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro |     |     |     |
| 165   | 170 | 175 |     |
| Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr |     |     |     |
| 180   | 185 | 190 |     |
| Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val |     |     |     |
| 195   | 200 | 205 |     |
| Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Thr Cys Asn |     |     |     |
| 210   | 215 | 220 |     |
| Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Leu |     |     |     |
| 225   | 230 | 235 | 240 |
| Lys Thr Pro Leu Gly Asp Thr Thr His Thr Cys Pro Arg Cys Pro Glu |     |     |     |
| 245   | 250 | 255 |     |
| Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro |     |     |     |
| 260   | 265 | 270 |     |
| Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Glu Pro Lys |     |     |     |
| 275   | 280 | 285 |     |
| Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro Ala Pro Glu Leu |     |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 290   | 295 | 300 |     |
| Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr |     |     |     |
| 305   | 310 | 315 | 320 |
| Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val |     |     |     |
|   | 325 | 330 | 335 |
| Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr Val Asp Gly Val |     |     |     |
|   | 340 | 345 | 350 |
| Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser |     |     |     |
|   | 355 | 360 | 365 |
| Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu |     |     |     |
|   | 370 | 375 | 380 |
| Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala |     |     |     |
| 385   | 390 | 395 | 400 |
| Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro |     |     |     |
|   | 405 | 410 | 415 |
| Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln |     |     |     |
|   | 420 | 425 | 430 |
| Val Ile Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala |     |     |     |
|   | 435 | 440 | 445 |
| Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn Tyr Asn Thr Thr |     |     |     |
|   | 450 | 455 | 460 |
| Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu |     |     |     |
| 465   | 470 | 475 | 480 |
| Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile Phe Ser Cys Ser |     |     |     |
|   | 485 | 490 | 495 |
| Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln Lys Ser Leu Ser |     |     |     |
|   | 500 | 505 | 510 |
| Leu Ser Pro Gly Lys   |     |     |     |
| 515   |     |     |     |

&lt;210&gt; 4240

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4240

Met Ala Thr Glu Phe Ile Lys Ser Cys Cys Gly Gly Cys Phe Tyr Gly  
 1 5 10 15  
 Glu Thr Glu Lys His Asn Phe Ser Val Glu Arg Asp Phe Lys Ala Ala  
 20 25 30  
 Val Pro Asn Ser Gln Asn Ala Thr Ile Ser Val Pro Pro Leu Thr Ser  
 35 40 45  
 Val Ser Val Lys Pro Gln Leu Gly Cys Thr Glu Gly Tyr Leu Leu Ser  
 50 55 60  
 Lys Leu Pro Ser Asp Gly Lys Glu Val Pro Phe Val Val Pro Lys Phe  
 65 70 75 80  
 Lys Leu Ser Tyr Ile Gln Pro Arg Thr Gln Glu Thr Pro Ser His Leu  
 85 90 95  
 Glu Glu Leu Glu Gly Ser Ala Arg Ala Ser Phe Gly Asp Arg Lys Val  
 100 105 110  
 Glu Leu Ser Ser Ser Ser Gln His Gly Pro Ser Tyr Asp Val Tyr Asn  
 115 120 125  
 Pro Phe Tyr Met Tyr Gln His Ile Ser Pro Asp Leu Ser Arg Arg Phe  
 130 135 140  
 Pro Pro Arg Ser Glu Val Thr Arg Leu Tyr Gly Ser Val Cys Asp Leu  
 145 150 155 160  
 Arg Thr Asn Lys Leu Pro Gly Ser Pro Gly Leu Ser Lys Ser Met Phe  
 165 170 175  
 Asp Leu Thr Asn Ser Ser Gln Arg Phe Ile Gln Arg His Asp Ser Leu  
 180 185 190  
 Ser Ser Val Pro Ser Ser Ser Ser Ser Arg Lys Asn Ser Gln Gly Ser  
 195 200 205  
 Asn Arg Ser Leu Asp Thr Ile Thr Leu Ser Gly Asp Glu Arg Asp Phe  
 210 215 220  
 Gly Arg Leu Asn Val Lys Leu Phe Tyr Asn Ser Ser Val Glu Gln Ile  
 225 230 235 240  
 Trp Ile Thr Val Leu Gln Cys Arg Asp Leu Ser Trp Pro Ser Ser Tyr  
 245 250 255  
 Gly Asp Thr Pro Thr Val Ser Ile Lys Gly Ile Leu Thr Leu Pro Lys  
 260 265 270  
 Pro Val His Phe Lys Ser Ser Ala Lys Glu Gly Ser Asn Val Cys His

275                      280                      285  
 Ala Glu Leu Glu Leu Gly Thr Cys Phe Gln Ala Val Asn Ser Arg Ile  
 290                      295                      300  
 Gln Leu Gln Ile Leu Glu Ala Arg Tyr Leu Pro Ser Ser Ser Thr Pro  
 305                      310                      315                      320  
 Leu Thr Leu Ser Phe Phe Val Lys Val Gly Met Phe Ser Ser Gly Glu  
 325                      330                      335  
 Leu Ile Tyr Lys Lys Lys Thr Arg Leu Leu Lys Ala Ser Asn Gly Arg  
 340                      345                      350  
 Val Lys Trp Gly Glu Thr Met Ile Phe Pro Leu Ile Gln Ser Glu Lys  
 355                      360                      365  
 Glu Ile Val Phe Leu Ile Lys Leu Tyr Ser Arg Ser Ser Val Arg Arg  
 370                      375                      380  
 Lys His Phe Val Gly Gln Ile Trp Ile Ser Glu Asp Ser Asn Asn Ile  
 385                      390                      395                      400  
 Glu Ala Val Asn Gln Trp Lys Glu Thr Val Ile Asn Pro Glu Lys Val  
 405                      410                      415  
 Val Ile Arg Trp His Lys Leu Asn Pro Ser  
 420                      425

<210> 4241

<211> 114

<212> PRT

<213> Homo sapiens

<400> 4241

Met Asn Glu Arg Gln Gly Leu Ala Leu Leu Pro Arg Leu Gln Cys Ser

1                      5                      10                      15  
 Gly Lys Ile Ser Ala His Cys Ser Leu Lys His Leu Gly Ser Ser Asp  
 20                      25                      30  
 Pro Pro Thr Phe Ala Ser Gln Val Ala Gly Thr Thr Gly Val His Gln  
 35                      40                      45  
 His Val Tyr Leu Ile Phe Val Phe Phe Val Glu Met Gly Ser His Asn  
 50                      55                      60

Val Val Gln Ala Gly Leu Lys His Leu Gly Ser Ser Asp Pro Pro Thr  
 65                      70                      75                      80  
 Ser Ala Ser Gln Ser Ala Gly Ile Ile Gly Leu Ser His Gln Ala Thr  
                     85                      90                      95  
 Arg Pro Val Cys Leu Phe Ile Tyr Leu Gln Ser Leu Thr Leu Leu Pro  
                     100                      105                      110  
 Arg Leu

<210> 4242

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4242

Met Leu Leu Ala Lys His Val Val Lys His Tyr Gly Gln Gln Met Lys  
 1                      5                      10                      15  
 Leu Ser Met Lys His Gln Leu Pro Lys Met Lys Thr Phe His Glu Pro  
                     20                      25                      30  
 Thr Thr Ile Leu Gly Asn Ser Leu Pro Lys Cys Thr Glu Ile Lys Pro  
                     35                      40                      45  
 Glu Val Asn Thr Leu Thr Ala Glu Asn Lys Leu Trp Asp Asp Ala Lys  
                     50                      55                      60  
 Asn Gly Phe Ala Arg Cys Thr Ala Ala Glu Ile Gln Arg Phe Ala Phe  
 65                      70                      75                      80  
 Ser Ala Thr Gly Leu Leu Ser His Val Glu Glu Gly Leu Asp Ser Asp  
                     85                      90                      95  
 Ala Thr Asp Ser Ser Ser Asp Asp Asp Leu Asp Glu Tyr Thr Leu Arg  
                     100                      105                      110  
 Lys Asn Val Ala Val  
                     115

<210> 4243

<211> 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4243

Met Gly Leu Leu Ala Phe Arg Asp Val Ala Leu Glu Phe Ser Pro Glu  
 1 5 10 15  
 Glu Trp Glu Cys Leu Asp Pro Ala Gln Arg Ser Leu Tyr Arg Asp Val  
 20 25 30  
 Met Leu Glu Asn Tyr Arg Asn Leu Ile Ser Leu Gly Leu Ala Met Ser  
 35 40 45  
 Lys Pro Glu Leu Ile Ile Cys Leu Glu Ala Arg Lys Glu Pro Trp Asn  
 50 55 60  
 Val Asn Thr Glu Lys Thr Ala Lys His Ser Val Ala Thr Arg Phe Arg  
 65 70 75 80  
 His Val Gly Gln Ala Gly Leu Lys Leu Leu Thr Ser Gly Asp Pro Pro  
 85 90 95  
 Ala Leu Ala Ser Gln Ser Ala Gly Ile Thr Gly Thr Gly His His Cys  
 100 105 110  
 Gln Pro Ile Cys Val Phe  
 115

&lt;210&gt; 4244

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4244

Met Ser Gly Ser Asn Pro Lys Ala Ala Ala Ala Ala Ser Ala Ala Gly  
 1 5 10 15  
 Pro Gly Gly Leu Val Ala Gly Lys Glu Glu Lys Lys Lys Ala Gly Gly  
 20 25 30  
 Gly Val Leu Asn Arg Leu Lys Ala Arg Arg Gln Ala Pro His His Ala  
 35 40 45  
 Ala Asp Asp Gly Val Gly Ala Ala Val Thr Glu Gln Glu Leu Leu Ala  
 50 55 60

Met Glu Phe Ala Val Phe Cys Leu Arg Arg Arg Arg Met Gly Arg Gln  
1 5 10 15  
Val Ser Cys Pro Val Gly Leu Gly Val Ile Val Gly Val Thr Leu His



|   |     |     |
|---|-----|-----|
| 20  | 25  | 30  |
| Leu Asn Leu Ser Ala Leu Pro Ser Ser Ser Ser Ala Ser Ala Trp Ser |     |     |
| 35  | 40  | 45  |
| Glu Thr Leu Ser Leu Trp Lys Val Thr Pro Gly Arg Ile His Leu Leu |     |     |
| 50  | 55  | 60  |
| Ser Cys Phe His His Gly Ile Leu Ala Cys Ala Gly Val Ser Pro Ser |     |     |
| 65  | 70  | 75  |
| Ser Ser Ser Cys Ala Leu Arg Ile His Cys Cys Trp Tyr Ala Leu Ser |     |     |
| 85  | 90  | 95  |
| Ser Ala Leu Glu Leu Ala Gln Val Pro Leu Asp Ile His Thr Thr Asn |     |     |
| 100   | 105 | 110 |
| Ser Leu Ala Leu Gln Arg Trp Thr Arg Cys Leu Phe Asn Ser Leu Tyr |     |     |
| 115   | 120 | 125 |
| Cys His Phe His Pro Ser Glu Ala Phe Cys Ser                     |     |     |
| 130   | 135 |     |

&lt;210&gt; 4246

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4246

|   |    |    |
|---|----|----|
| Met Asp Lys Lys Ile Ser Ile Leu Lys Asp His Gly Tyr Ile Glu Asn |    |    |
| 1   | 5  | 10 |
| Leu Thr Phe Gly Trp Asp Gly Pro Ser Trp Arg Leu Leu Thr Ala Leu |    |    |
| 20  | 25 | 30 |
| Lys Leu Leu Cys Leu Glu Ala Glu Lys Phe Thr Cys Trp Lys Lys Val |    |    |
| 35  | 40 | 45 |
| Leu Leu Gly Glu Val Ile Ser Asp Thr Asn Glu Lys Thr Ser Leu Asp |    |    |
| 50  | 55 | 60 |
| Ile Ala Gln Lys Ile Cys Tyr Tyr Phe Ile Glu Glu Thr Asn Ala Val |    |    |
| 65  | 70 | 75 |
| Leu Gln Lys Val Ser His Met Lys Asp Glu Lys Glu Ala Leu Ile Asn |    |    |
| 85  | 90 | 95 |
| Gln Leu Thr Leu Val Glu Ser Leu Trp Thr Glu Glu Leu Lys Ile Leu |    |    |

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
|     | 100 |     | 105 |     | 110 |
| Arg | Ala | Ser | Ala | Glu | Thr |
|     |     | Leu | His | Ser | Leu |
|     |     |     | Gln | Thr | Ala |
|     |     |     |     | Phe | Thr |
|     | 115 |     | 120 |     | 125 |

&lt;210&gt; 4247

&lt;211&gt; 282

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4247

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Gln | Leu | Leu | Ser | Gln | Pro | Arg | Ser | Lys | Thr | Met | Cys | Leu | Lys |
| 1   |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Cys | Asp | Leu | Gln | Glu | Arg | Leu | Leu | Cys | Pro | Ser | Leu | Leu | Ala | Gly | Thr |
|     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |
| Ala | Asp | Gly | Ser | Leu | Arg | Met | Asp | Asp | Pro | Lys | Gly | Asp | Phe | Ile | Thr |
|     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |
| Leu | Tyr | Gln | Met | Ala | Ser | Gln | Ser | Ser | Ala | Ser | His | Tyr | Lys | Leu | Gln |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Val | Ile | Lys | Ala | Leu | Lys | Ser | Ser | Gly | Leu | Cys | Glu | Ser | Leu | Thr | Tyr |
|     | 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |
| Gly | Leu | Pro | Phe | Ile | Leu | Arg | Pro | Thr | Ser | Cys | Trp | Gln | Leu | Asp | Trp |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Asp | Glu | Leu | Glu | Thr | Asn | Gln | Gln | His | Phe | His | Ala | Leu | Cys | His | Ser |
|     | 100 |     |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Leu | Leu | Lys | Arg | Glu | Trp | Leu | Leu | Leu | Ala | Lys | Gly | Glu | Pro | Pro | Gly |
|     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |
| Pro | Gly | His | Ser | Gln | Arg | Ile | Pro | Ala | Ser | Thr | Phe | Tyr | Val | Ile | Met |
|     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |
| Pro | Ser | His | Ser | Leu | Thr | Leu | Leu | Val | Lys | Ala | Val | Ala | Thr | Arg | Glu |
|     | 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |
| Leu | Met | Leu | Pro | Ser | Thr | Phe | Pro | Leu | Leu | Pro | Glu | Asp | Pro | His | Asp |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |     |     |     |
| Asp | Ser | Leu | Lys | Asn | Val | Glu | Ser | Met | Leu | Asp | Ser | Leu | Glu | Leu | Glu |
|     | 180 |     |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Pro | Thr | Tyr | Asn | Pro | Leu | His | Val | Gln | Ser | His | Leu | Tyr | Ser | His | Leu |

|   |     |     |
|---|-----|-----|
| 195   | 200 | 205 |
| Ser Ser Ile Tyr Ala Lys Pro Gln Gly Arg Leu His Pro His Trp Glu |     |     |
| 210   | 215 | 220 |
| Ser Arg Ala Pro Arg Lys Thr Gly Gln Leu Gln Thr Asn Arg Ala Arg |     |     |
| 225   | 230 | 235 |
| Ala Thr Val Ala Pro Leu Pro Met Thr Pro Val Pro Gly Arg Ala Ser |     |     |
| 245   | 250 | 255 |
| Lys Met Pro Ala Ala Ser Lys Ser Ser Ser Asp Ala Phe Phe Leu Pro |     |     |
| 260   | 265 | 270 |
| Ser Glu Trp Glu Lys Asp Pro Ser Arg Pro                         |     |     |
| 275   | 280 |     |

&lt;210&gt; 4248

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4248

|   |     |     |
|---|-----|-----|
| Met Gly Leu Tyr Ala Ala Ala Ala Gly Val Leu Ala Gly Val Glu Ser |     |     |
| 1   | 5   | 10  |
| Arg Gln Gly Ser Ile Lys Gly Leu Val Tyr Ser Ser Asn Phe Gln Asn |     |     |
| 20  | 25  | 30  |
| Val Lys Gln Leu Tyr Ala Leu Val Cys Glu Thr Gln Arg Tyr Ser Ala |     |     |
| 35  | 40  | 45  |
| Val Leu Asp Ala Val Ile Ala Ser Ala Gly Leu Leu Arg Ala Glu Lys |     |     |
| 50  | 55  | 60  |
| Lys Leu Arg Pro His Leu Ala Lys Val His Arg Gly Val Ser Arg Asn |     |     |
| 65  | 70  | 75  |
| Glu Asp Leu Leu Glu Val Gly Ser Arg Pro Gly Pro Ala Ser Gln Leu |     |     |
| 85  | 90  | 95  |
| Pro Arg Phe Val Arg Val Asn Thr Leu Lys Thr Cys Ser Asp Asp Val |     |     |
| 100   | 105 | 110 |
| Val Asp Tyr Phe Lys Arg Gln Gly Phe Ser Tyr Gln Gly Arg Ala Ser |     |     |
| 115   | 120 | 125 |

Ser Leu Asp Asp Leu Arg Ala Leu Lys Gly Lys His Phe Leu Leu Asp  
 130 135 140  
 Pro Leu Met Pro Glu Leu Leu Val Phe Pro Ala Gln Thr Asp Leu His  
  
 145 150 155 160  
 Glu His Pro Leu Tyr Arg Ala Gly His Leu Ile Leu Gln Asp Arg Ala  
 165 170 175  
 Ser Cys Leu Pro Ala Met Leu Leu Asp Pro Pro Pro Gly Ser His Val  
 180 185 190  
 Ile Asp Ala Cys Ala Ala Pro Gly Asn Lys Thr Ser His Leu Ala Ala  
 195 200 205  
 Leu Leu Lys Asn Gln Gly Lys Ile Phe Ala Phe Asp Leu Asp Ala Lys  
 210 215 220  
 Arg Leu Ala Ser Met Ala Thr Leu Leu Ala Arg Ala Gly Val Ser Cys  
 225 230 235 240  
 Cys Glu Leu Ala Glu Glu Asp Phe Leu Ala Val Ser Pro Ser Asp Pro  
 245 250 255  
 Arg Tyr His Glu Val His Tyr Ile Leu Leu Asp Pro Ser Cys Ser Gly  
 260 265 270  
 Ser Gly Met Pro Ser Arg Gln Leu Glu Glu Pro Gly Ala Gly Thr Pro  
 275 280 285  
 Ser Pro Val Arg Leu His Ala Leu Ala Gly Phe Gln Gln Arg Ala Leu  
 290 295 300  
 Cys His Ala Leu Thr Phe Pro Ser Leu Gln Arg Leu Val Tyr Ser Thr  
 305 310 315 320  
 Cys Ser Leu Cys Gln Glu Glu Asn Glu Asp Val Val Arg Asp Ala Leu  
 325 330 335  
 Gln Gln Asn Pro Gly Ala Phe Arg Leu Ala Pro Ala Leu Pro Ala Trp  
 340 345 350  
 Pro His Arg Gly Leu Ser Thr Phe Pro Gly Ala Glu His Cys Leu Arg  
 355 360 365  
 Ala Ser Pro Glu Thr Thr Leu Ser Ser Gly Phe Phe Val Ala Val Ile  
 370 375 380  
 Glu Arg Ala Glu Val Pro Arg  
 385 390

&lt;210&gt; 4249

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4249

Met Glu Phe Leu Leu Gly Asn Pro Phe Ser Thr Pro Val Gly Gln Cys  
 1 5 10 15  
 Leu Glu Lys Ala Thr Asp Gly Ser Leu Gln Ser Glu Asp Trp Thr Leu  
 20 25 30  
 Asn Met Glu Ile Cys Asp Ile Ile Asn Glu Thr Glu Glu Gly Pro Lys  
 35 40 45  
 Asp Ala Ile Arg Ala Leu Lys Lys Arg Leu Asn Gly Asn Arg Asn Tyr  
 50 55 60  
 Arg Glu Val Met Leu Ala Leu Thr Val Leu Glu Thr Cys Val Lys Asn  
 65 70 75 80  
 Cys Gly His Arg Phe His Ile Leu Val Ala Asn Arg Asp Phe Ile Asp  
 85 90 95  
 Ser Val Leu Val Lys Ile Ile Ser Pro Lys Asn Asn Pro Pro Thr Ile  
 100 105 110  
 Val Gln Asp Lys Val Leu Ala Leu Ile Gln Ala Trp Ala Asp Ala Phe  
 115 120 125  
 Arg Ser Ser Pro Asp Leu Thr Gly Val Val His Ile Tyr Glu Glu Leu  
 130 135 140  
 Lys Arg Lys Gly Val Glu Phe Pro Met Ala Asp Leu Asp Ala Leu Ser  
 145 150 155 160  
 Pro Ile His Thr Pro Gln Arg Ser Val Pro Glu Val Asp Pro Ala Ala  
 165 170 175  
 Thr Met Pro Arg Ser Gln Ser Gln Gln Arg Thr Ser Ala Gly Ser Tyr  
 180 185 190  
 Ser Ser Pro Pro Pro Ala Pro Tyr Ser Ala Pro Gln Ala Pro Ala Leu  
 195 200 205  
 Ser Val Thr Gly Pro Ile Thr Ala Asn Ser Glu Gln Ile Ala Arg Leu  
 210 215 220  
 Arg Ser Glu Leu Asp Val Val Arg Gly Asn Thr Lys Val Met Ser Glu



&lt;210&gt; 4250

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4250

```

Met Glu Val Ser Tyr Thr Pro Leu Thr Val Phe Ser Ser Ser Val Val
  1              5              10              15
Thr Lys Pro Tyr Pro Ser Leu Ser Ile Arg Ser Thr Ile Phe Pro Ser
      20              25              30
Leu Ser Ser Leu Ser Ser Gly Val Ser Ser Ser Lys Phe Leu Glu Ser
      35              40              45
Phe Leu Pro Arg Lys Ala Ser Trp Ser Tyr Trp Lys Leu Trp Leu Ser
      50              55              60
Ser Gly Gly Arg Ser Pro Ser Ser Glu Ser Gly Arg Thr Thr Arg Ser
      65              70              75              80
Leu Arg Thr Val Gly Leu Ala Arg Arg Thr Arg Gly Ala Ser Thr Ser
      85              90              95
Ala Ser Ser Ser Pro Arg Ala Asn Pro Gly Gly His Arg Ala Pro Ser
      100             105             110
Ser Arg Gly Glu Gly Gly Arg Glu Gly Asp Ala Glu Arg Ala Thr Thr
      115             120             125
Ala Ala Ala Arg Glu Trp Gly Leu Gly Ala Arg Arg Pro Ser Phe Met
      130             135             140
Leu Cys Ile Phe Tyr Lys
145              150

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&lt;210&gt; 4251

&lt;211&gt; 716

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4251

```

Met Leu Lys Asp Tyr Leu Val Val Ala Gln Glu Ala Leu Ser Ala Gln

```

|                         |                     |                         |     |
|-------------------------|---------------------|-------------------------|-----|
| 1                       | 5                   | 10                      | 15  |
| Lys Glu Ile Tyr Gln Val | Lys Gln Gln Arg Leu | Glu Leu Ala Gln Gln     |     |
| 20                      | 25                  | 30                      |     |
| Glu Tyr Gln Gln Leu His | Ala Val Trp Glu His | Lys Leu Gly Ser Gln     |     |
| 35                      | 40                  | 45                      |     |
| Val Ser Leu Val Ser Gly | Ser Ser Ser Ser Ser | Lys Tyr Asp Pro Glu     |     |
| 50                      | 55                  | 60                      |     |
| Ile Leu Lys Ala Glu Ile | Ala Thr Ala Lys Ser | Arg Val Asn Lys Leu     |     |
| 65                      | 70                  | 75                      | 80  |
| Lys Arg Glu Met Val His | Leu Gln His Glu Leu | Gln Phe Lys Glu Arg     |     |
| 85                      | 90                  | 95                      |     |
| Gly Phe Gln Thr Leu Lys | Lys Lys Ile Asp Lys | Lys Met Ser Asp Ala Gln |     |
| 100                     | 105                 | 110                     |     |
| Gly Ser Tyr Lys Leu Asp | Glu Ala Gln Ala Val | Leu Arg Glu Thr Lys     |     |
| 115                     | 120                 | 125                     |     |
| Ala Ile Lys Lys Ala Ile | Thr Cys Gly Glu Lys | Glu Lys Gln Asp Leu     |     |
| 130                     | 135                 | 140                     |     |
| Ile Lys Ser Leu Ala Met | Leu Lys Asp Gly Phe | Arg Thr Asp Arg Gly     |     |
| 145                     | 150                 | 155                     | 160 |
| Ser His Ser Asp Leu Trp | Ser Ser Ser Ser Ser | Leu Glu Ser Ser Ser     |     |
| 165                     | 170                 | 175                     |     |
| Phe Pro Leu Pro Lys Gln | Tyr Leu Asp Val Ser | Ser Gln Thr Asp Ile     |     |
| 180                     | 185                 | 190                     |     |
| Ser Gly Ser Phe Gly Ile | Asn Ser Asn Asn Gln | Leu Ala Glu Lys Val     |     |
| 195                     | 200                 | 205                     |     |
| Arg Leu Arg Leu Arg Tyr | Glu Glu Ala Lys Arg | Arg Ile Ala Asn Leu     |     |
| 210                     | 215                 | 220                     |     |
| Lys Ile Gln Leu Ala Lys | Leu Asp Ser Glu Ala | Trp Pro Gly Val Leu     |     |
| 225                     | 230                 | 235                     | 240 |
| Asp Ser Glu Arg Asp Arg | Leu Ile Leu Ile Asn | Glu Lys Glu Glu Leu     |     |
| 245                     | 250                 | 255                     |     |
| Leu Lys Glu Met Arg Phe | Ile Ser Pro Arg Lys | Trp Thr Gln Gly Glu     |     |
| 260                     | 265                 | 270                     |     |
| Val Glu Gln Leu Glu Met | Ala Arg Lys Arg Leu | Glu Lys Asp Leu Gln     |     |
| 275                     | 280                 | 285                     |     |
| Ala Ala Arg Asp Thr Gln | Ser Lys Ala Leu Thr | Glu Arg Leu Lys Leu     |     |



|   |     |     |
|---|-----|-----|
| 290   | 295 | 300 |
| Asn Ser Lys Arg Asn Gln Leu Val Arg Glu Leu Glu Glu Ala Thr Arg |     |     |
| 305   | 310 | 315 |
| Gln Val Ala Thr Leu His Ser Gln Leu Lys Ser Leu Ser Ser Ser Met |     | 320 |
|   | 325 | 330 |
| Gln Ser Leu Ser Ser Gly Ser Ser Pro Gly Ser Leu Thr Ser Ser Arg |     | 335 |
|   | 340 | 345 |
| Gly Ser Leu Val Ala Ser Ser Leu Asp Ser Ser Thr Ser Ala Ser Phe |     | 350 |
|   | 355 | 360 |
| Thr Asp Leu Tyr Tyr Asp Pro Phe Glu Gln Leu Asp Ser Glu Leu Gln |     | 365 |
|   | 370 | 375 |
| Ser Lys Val Glu Phe Leu Leu Leu Glu Gly Ala Thr Gly Phe Arg Pro |     | 380 |
| 385   | 390 | 395 |
| Ser Gly Cys Ile Thr Thr Ile His Glu Asp Glu Val Ala Lys Thr Gln |     | 400 |
|   | 405 | 410 |
| Lys Ala Glu Gly Gly Gly Arg Leu Gln Ala Leu Arg Ser Leu Ser Gly |     | 415 |
|   | 420 | 425 |
| Thr Pro Lys Ser Met Thr Ser Leu Ser Pro Arg Ser Ser Leu Ser Ser |     | 430 |
|   | 435 | 440 |
| Pro Ser Pro Pro Cys Ser Pro Leu Met Ala Asp Pro Leu Leu Ala Gly |     | 445 |
|   | 450 | 455 |
| Asp Ala Phe Leu Asn Ser Leu Glu Phe Glu Asp Pro Glu Leu Ser Ala |     | 460 |
| 465   | 470 | 475 |
| Thr Leu Cys Glu Leu Ser Leu Gly Asn Ser Ala Gln Glu Arg Tyr Arg |     | 480 |
|   | 485 | 490 |
| Leu Glu Glu Pro Gly Thr Glu Gly Lys Gln Leu Gly Gln Ala Val Ser |     | 495 |
|   | 500 | 505 |
| Thr Ala Gln Gly Cys Gly Leu Lys Val Ala Cys Val Ser Ala Ala Val |     | 510 |
|   | 515 | 520 |
| Ser Asp Glu Ser Val Ala Gly Asp Ser Gly Val Tyr Glu Ala Ser Val |     | 525 |
|   | 530 | 535 |
| Gln Arg Leu Gly Ala Ser Glu Ala Ala Ala Phe Asp Ser Asp Glu Ser |     | 540 |
| 545   | 550 | 555 |
| Glu Ala Val Gly Ala Thr Arg Ile Gln Ile Ala Leu Lys Tyr Asp Glu |     | 560 |
|   | 565 | 570 |
| Lys Asn Lys Gln Phe Ala Ile Leu Ile Ile Gln Leu Ser Asn Leu Ser |     | 575 |

580 585 590  
 Ala Leu Leu Gln Gln Gln Asp Gln Lys Val Asn Ile Arg Val Ala Val  
 595 600 605  
 Leu Pro Cys Ser Glu Ser Thr Thr Cys Leu Phe Arg Thr Arg Pro Leu  
 610 615 620  
 Asp Ala Ser Asp Thr Leu Val Phe Asn Glu Val Phe Trp Val Ser Met  
 625 630 635 640  
 Ser Tyr Pro Ala Leu His Gln Lys Thr Leu Arg Val Asp Val Cys Thr  
 645 650 655  
 Thr Asp Arg Ser His Leu Glu Glu Cys Leu Gly Gly Ala Gln Ile Ser  
 660 665 670  
 Leu Ala Glu Val Cys Arg Ser Gly Glu Arg Ser Thr Arg Trp Tyr Asn  
 675 680 685  
 Leu Leu Ser Tyr Lys Tyr Leu Lys Lys Gln Ser Arg Met Phe Ser Pro  
 690 695 700  
 Arg Lys Pro His Leu Ile Trp Met Gly Thr Gln His  
 705 710 715

<210> 4252

<211> 286

<212> PRT

<213> Homo sapiens

<400> 4252

Met Glu Asp Arg His Val Ser Leu Pro Ser Phe Asn Gln Leu Phe Gly  
 1 5 10 15  
 Leu Ser Asp Pro Val Asn Arg Ala Tyr Phe Ala Val Phe Asp Gly His  
 20 25 30  
 Gly Gly Val Asp Ala Ala Arg Tyr Ala Ala Val His Val His Thr Asn  
 35 40 45  
 Ala Ala Arg Gln Pro Glu Leu Pro Thr Asp Pro Glu Gly Ala Leu Arg  
 50 55 60  
 Glu Ala Phe Arg Arg Thr Asp Gln Met Phe Leu Arg Lys Ala Lys Arg  
 65 70 75 80  
 Glu Arg Leu Gln Ser Gly Thr Thr Gly Val Cys Ala Leu Ile Ala Gly

|   |   |             |     |
|---|---|-------------|-----|
|   | 85  | 90          | 95  |
| Ala Thr Leu His Val   | Ala Trp Leu Gly Asp Ser Gln Val             | Ile Leu Val |     |
| 100   | 105   | 110         |     |
| Gln Gln Gly Gln Val   | Val Lys Leu Met Glu Pro His Arg Pro Glu Arg |             |     |
| 115   | 120   | 125         |     |
| Gln Asp Glu Lys Ala Arg   | Ile Glu Ala Leu Gly Gly Phe Val Ser His     |             |     |
| 130   | 135   | 140         |     |
| Met Asp Cys Trp Arg Val   | Asn Gly Thr Leu Ala Val Ser Arg Ala Ile     |             |     |
| 145   | 150   | 155         | 160 |
| Gly Asp Val Phe Gln Lys Pro Tyr Val                             | Ser Gly Glu Ala Asp Ala Ala                 |             |     |
| 165   | 170   | 175         |     |
| Ser Arg Ala Leu Thr Gly Ser Glu Asp Tyr Leu Leu Leu Ala Cys Asp |   |             |     |
| 180   | 185   | 190         |     |
| Gly Phe Phe Asp Val Val Pro His Gln Glu Val Val Gly Leu Val Gln |   |             |     |
| 195   | 200   | 205         |     |
| Ser His Leu Thr Arg Gln Gln Gly Ser Gly Leu Arg Val Ala Glu Glu |   |             |     |
| 210   | 215   | 220         |     |
| Leu Val Ala Ala Ala Arg Glu Arg Gly Ser His Asp Asn Ile Thr Val |   |             |     |
| 225   | 230   | 235         | 240 |
| Met Val Val Phe Leu Arg Asp Pro Gln Glu Leu Arg Glu Gly Gly Asn |   |             |     |
| 245   | 250   | 255         |     |
| Gln Gly Glu Gly Asp Pro Gln Ala Glu Gly Arg Arg Gln Asp Leu Pro |   |             |     |
| 260   | 265   | 270         |     |
| Ser Ser Leu Pro Glu Pro Glu Thr Gln Ala Pro Pro Arg Ser         |   |             |     |
| 275   | 280   | 285         |     |

&lt;210&gt; 4253

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4253

|   |
|---|
| Met Pro His Pro Val Pro Met Ile Thr Pro Ser Pro Val Pro Phe Thr |
| 1 5 10 15   |
| Ala Lys Leu Leu Glu Ser Ser Phe Cys Thr Ser Cys Leu Leu Phe Leu |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |  |
| Cys | Ser | His | Pro | Cys | Ser | Ser | Pro | Phe | Gln | Ala | Gly | Ser | His | Pro | Asp |  |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |  |
| Cys | Leu | Thr | Glu | Thr | Val | Leu | Cys | Arg | Ser | Pro | Ala | Lys | Ser | Leu | Leu |  |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |  |
| Pro | Pro | Pro | Ala | Ala | Ser | Phe | Cys | Pro | His | Pro | Leu | Gly | Pro | Val | Ser |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Ser | Ile | Arg | Gly | Asn | Arg | Gln | His | Leu | Leu | Ser | Cys | Ser | Pro | Val | Met |  |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |  |
| Ala | Gly | His | Val | Val | Leu | Gly | Arg | Leu | Ala | Trp |     |     |     |     |     |  |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     |     |     |     |  |

&lt;210&gt; 4254

&lt;211&gt; 229

&lt;212&gt; PRT

<213> Homo sapiens

&lt;400&gt; 4254

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Pro | Glu | Gln | Ile | Leu | Pro | Thr | Gly | Ser | Glu | His | Val | Leu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Thr | Gly | Ser | Glu | Gln | Ile | Leu | Pro | Thr | Gly | Ser | Glu | Gln | Ile | Leu | Pro |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Met | Gly | Ser | Glu | Gln | Ile | Leu | Pro | Met | Pro | Ser | Glu | Gln | Val | Leu | Pro |
|     |     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |
| Met | Gly | Ser | Glu | His | Val | Leu | Pro | Thr | Gly | Ser | Glu | Gln | Val | Leu | Pro |
|     |     |     | 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Thr | Gly | Ser | Glu | Gln | Val | Leu | Pro | Thr | Gly | Ser | Glu | His | Val | Leu | Pro |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Thr | Gly | Ser | Glu | Gln | Val | Leu | Leu | Pro | Thr | Gly | Ser | Asp | His | Val | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Pro | Thr | Gly | Ser | Glu | His | Val | Leu | Ser | Thr | Gly | Ser | Glu | Gln | Val | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Met | Gly | Ser | Glu | His | Val | Leu | Pro | Thr | Gly | Ser | Glu | Gln | Val | Leu |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Pro | Thr | Gly | Ser | Met | Ser | Ser | Pro | Arg | Gly | Leu | Ser | Met | Ser | Ser | Pro |

130                      135                      140  
 Trp Val Leu Ser Lys Ser Ser Pro Trp Gly Leu Ser Lys Ser Ser Pro  
 145                      150                      155                      160  
 Arg Gly Leu Ser Lys Ser Ser Pro Trp Gly Leu Ser Lys Ser Phe Leu  
                     165                      170                      175  
 Cys Arg Leu Ser Thr Ser Ser Pro Ser Cys Asp Arg Val Ser Leu Leu  
                     180                      185                      190  
 Gln Val Glu Asp Val Ala Arg Met His Leu Glu Gly Thr Pro Ala Ser  
                     195                      200                      205  
 Pro Glu Arg Pro Leu Leu Val Ala Trp Gly Val Ala Gly Trp Ser Gly  
                     210                      215                      220  
 Val Leu Gly Ala Leu  
 225

<210> 4255

<211> 105

<212> PRT

<213> Homo sapiens

<400> 4255

Met Gly Gln Asp Arg Ala Gly Ile Ala Val Thr Gly Trp Trp Lys Ile  
   1                      5                      10                      15  
 Leu Gln Lys His Leu Phe Cys Leu Glu Gly Pro Asn Ser Phe Lys Asn  
                     20                      25                      30  
 Met Cys Leu Ala Lys Ala His Ile Ser Gln Asn Leu Cys Lys Tyr Leu  
                     35                      40                      45  
 Glu Ala Phe Leu Leu Phe Tyr Val Asp Val Glu Ala Lys Glu Arg Lys  
                     50                      55                      60  
 Met Trp Pro His Val Cys Phe Gln Leu Leu Ile Ser Lys Tyr Leu Ala  
                     65                      70                      75                      80  
 Phe Ser Gly Met Arg Thr Asn Gln Ile Thr Phe Val Arg Tyr Ala Val  
                     85                      90                      95  
 Pro Leu Asp Cys Ser Leu Ser Phe Gly  
                     100                      105

<210> 4256  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 4256

```

Met Leu Phe Arg Ser Leu Pro Gly Asn Phe Asp Met Val His Val Phe
  1              5              10              15
Thr Gln Asn Pro Ile Lys Gln Gly Ser Leu Ala Val Gln Phe Pro Pro
      20              25              30
Val Leu Leu Ser Gly Trp Ile Gly Glu Gly Gly His Pro Ser Gln Leu
      35              40              45
Ser Ala Ser Thr Gln Pro Leu Trp Ala Met Trp Trp Gln Lys Gln Lys
      50              55              60
Ala Arg Gln Ala Pro Trp Glu Pro Gly Thr Leu Asp His Glu Ala Leu
      65              70              75              80
His Leu Ser Glu Leu Gly Phe Pro Ser Phe Lys Lys Ile Phe Arg Arg
      85              90              95
Gly Val Val Ala His Thr Cys Asn Pro Ser Thr Leu Gly Gly
      100              105              110

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<210> 4257  
 <211> 278  
 <212> PRT  
 <213> Homo sapiens

<400> 4257

```

Met Thr Asp Leu Asn Lys His Ile Lys Gln Ala Gln Thr Gln Arg Lys
  1              5              10              15
Gln Leu Leu Glu Glu Ser Arg Glu Leu His Arg Glu Lys Leu Leu Val
      20              25              30
Gln Ala Glu Asn Arg Phe Phe Leu Glu Tyr Leu Thr Asn Lys Thr Glu
      35              40              45
Glu Tyr Thr Glu Gln Pro Glu Lys Val Trp Asn Ser Tyr Leu Gln Lys

```

|   |     |     |
|---|-----|-----|
| 50  | 55  | 60  |
| Ser Gly Glu Ile Glu Arg Arg Arg Gln Glu Ser Ala Ser Arg Tyr Ala |     |     |
| 65  | 70  | 75  |
| Glu Gln Ile Ser Val Leu Lys Thr Ala Leu Leu Gln Lys Glu Asn Ile |     |     |
| 85  | 90  | 95  |
| Gln Ser Ser Leu Lys Arg Lys Leu Gln Ala Met Arg Asp Ile Ala Ile |     |     |
| 100   | 105 | 110 |
| Leu Lys Glu Lys Gln Glu Lys Glu Ile Gln Thr Leu Gln Glu Glu Thr |     |     |
| 115   | 120 | 125 |
| Lys Lys Val Gln Ala Glu Thr Ala Ser Lys Thr Arg Glu Val Gln Ala |     |     |
| 130   | 135 | 140 |
| Gln Leu Leu Gln Glu Lys Arg Leu Leu Glu Lys Gln Leu Ser Glu Pro |     |     |
| 145   | 150 | 155 |
| Asp Arg Arg Leu Leu Gly Lys Arg Lys Arg Arg Glu Leu Asn Met Lys |     |     |
| 165   | 170 | 175 |
| Ala Gln Ala Leu Lys Leu Ala Ala Lys Arg Phe Ile Phe Glu Tyr Ser |     |     |
| 180   | 185 | 190 |
| Cys Gly Ile Asn Arg Glu Asn Gln Gln Phe Lys Lys Glu Leu Leu Gln |     |     |
| 195   | 200 | 205 |
| Leu Ile Glu Gln Ala Gln Lys Leu Thr Ala Thr Gln Ser His Leu Glu |     |     |
| 210   | 215 | 220 |
| Asn Arg Lys Gln Gln Leu Gln Gln Glu Gln Trp Tyr Leu Glu Ser Leu |     |     |
| 225   | 230 | 235 |
| Ile Gln Ala Arg Gln Arg Leu Gln Gly Ser His Asn Gln Cys Leu Asn |     |     |
| 245   | 250 | 255 |
| Arg Gln Asp Val Pro Lys Thr Thr Pro Ser Leu Pro Gln Gly Thr Lys |     |     |
| 260   | 265 | 270 |
| Ser Arg Ile Asn Pro Lys   |     |     |
| 275   |     |     |

&lt;210&gt; 4258

&lt;211&gt; 327

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4258

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Leu | Met | Thr | Arg | Glu | Asn | Leu | Ala | Phe | Arg | Gly | Ser | Leu | Met |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Cys | Ser | Glu | Leu | Lys | Pro | Phe | Gln | Glu | Leu | Thr | His | Gln | Ser | Ala |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Val | Ser | His | Ser | Arg | Ala | Asp | Val | Ala | Asp | Val | Trp | Trp | Tyr | Cys | Gly |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Pro | Leu | Leu | Asp | Thr | Leu | Pro | Ser | Asn | Trp | Ser | Gly | Thr | Cys | Thr |
|     | 50  |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Leu | Val | Gln | Phe | Ala | Ile | Pro | Phe | Ala | Leu | Ala | Phe | Leu | Gln | Pro | Glu |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Lys | Glu | Lys | Pro | Gln | His | Arg | Lys | Ile | Arg | Glu | Ala | Pro | Tyr | Gly | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Asp | Ser | Gln | Val | Tyr | Leu | Asp | Ala | Thr | Gly | Val | Pro | Gln | Gly | Val |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |
| Pro | His | Lys | Phe | Lys | Ala | Gln | Asp | Gln | Ile | Ala | Ala | Gly | Phe | Glu | Ser |
|     |     | 115 |     |     |     |     |     | 120 |     |     |     | 125 |     |     |     |
| Ile | Phe | Trp | Trp | Val | Thr | Ile | Ser | Lys | Asn | Ile | Asp | Trp | Ile | Asn | Tyr |
|     |     | 130 |     |     |     |     |     | 135 |     |     |     | 140 |     |     |     |
| Ile | Tyr | Tyr | Asn | Gln | Gln | Arg | Phe | Ile | Asn | Tyr | Thr | Arg | Asp | Ala | Val |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |
| Lys | Gly | Ile | Ala | Glu | Gln | Leu | Gly | Pro | Thr | Ser | Gln | Met | Ala | Trp | Glu |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     | 175 |     |     |
| Asn | Arg | Met | Ala | Leu | Asp | Met | Ile | Leu | Ala | Lys | Lys | Gly | Gly | Val | Cys |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Met | Ile | Lys | Thr | Gln | Cys | Cys | Thr | Phe | Ile | Pro | Asn | Asn | Thr | Ala |
|     |     | 195 |     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |
| Pro | Ser | Gly | Ser | Ile | Thr | Arg | Ala | Leu | Gln | Gly | Leu | Thr | Ala | Leu | Ser |
|     |     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |
| Asn | Glu | Leu | Ala | Lys | Asn | Ser | Gly | Val | Asn | Asp | Pro | Phe | Ser | Gly | Trp |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Leu | Glu | Arg | Trp | Phe | Gly | Lys | Trp | Lys | Gly | Ile | Ile | Ala | Ser | Ile | Leu |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     | 255 |     |     |
| Thr | Ser | Leu | Ala | Ala | Val | Ile | Gly | Val | Val | Ile | Leu | Phe | Gly | Cys | Cys |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Thr | Pro | Cys | Ile | Arg | Gly | Leu | Val | Gln | Arg | Leu | Ile | Glu | Thr | Val |



275                      280                      285  
 Leu Thr Lys Thr Ser Leu Ser Ser Pro Pro Pro Tyr Ser Asp Lys Leu  
 290                      295                      300  
 Phe Leu Leu Glu Asp Gln Val Glu Gln Gln Ser Gln Asp Leu Leu Lys  
 305                      310                      315                      320  
 Arg Phe Glu Glu Glu Gly Pro  
 325

<210> 4259

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4259

Met Phe Leu Pro Arg Glu Val Leu Leu Arg Leu Trp Val Gln Ile Ala  
 1                      5                      10                      15  
 Ile Leu Gly Cys Arg Tyr Ile Pro Gly Asp Ser Val Pro Ser Leu Met  
 20                      25                      30  
 Val Ala Gln His Arg Pro Ala Arg Val Ala Ser Ala Ser Trp Ser Arg  
 35                      40                      45  
 Ala Ala Arg Gly Gln Ala Trp Trp Leu Ala Pro Met Ile Pro Thr Leu  
 50                      55                      60  
 Trp Glu Thr Glu Val Gly Arg Ser Leu Glu Pro Arg Ser Ser Arg Pro  
 65                      70                      75                      80  
 Thr Trp Ala Ala Trp Gln Lys Pro Ser Leu Gln Lys Ile Gln Asn Ser  
 85                      90                      95  
 Pro Gly His Gly Gly Ala Phe Leu Trp Ser Gln Pro Lys Leu Ala Gly  
 100                      105                      110  
 His Gly Gly Val Cys Leu  
 115

<210> 4260

<211> 197

<212> PRT

<213> Homo sapiens

<400> 4260

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Met Gly Gly Ala Gly Gly Gln His Gly Thr Asp Leu His Pro Ala Leu
 1              5              10              15
Gln Thr Gly Thr Thr Ala Arg Pro Cys Cys Trp Met Val Ser Ser Val
      20              25              30
Trp Ala Pro Ser Trp Asn Thr Thr Gln Ser Thr Ala Thr Gly Thr Ala
      35              40              45
Leu Thr Glu Ala Arg Gly Pro Ala Cys Pro Gly Pro Leu Ser Leu Lys
      50              55              60
Pro Arg Leu Val Pro Pro Thr Cys Cys Val Met Val Trp Leu Pro Arg
      65              70              75              80
Pro Ser Leu Gly Trp Val Trp Gly Trp Ser Gly Leu Ala His Ala Ser
      85              90              95
His Leu Cys Leu His Leu Cys Cys His Pro Ala Pro Pro Ser Ser Ser
      100              105              110
Ser Pro Ala Ser Ser Ser Leu Cys Ala Ser Val Ser Cys Arg Lys Lys
      115              120              125
Trp Val Glu Pro Glu Arg Arg Leu Ser Glu Glu Gly Arg Gly Arg Ala
      130              135              140
Trp Gly Gly Ser Pro Thr Pro His Pro Lys Pro Gln Gly Leu Pro Pro
      145              150              155              160
Gly Ser Gly Arg Gly Arg Ser Trp Leu Cys Gly Val Val Ala Pro Leu
      165              170              175
Leu Leu Pro Cys Phe Ser His Leu Ser Cys Pro Ser Leu Val Pro Thr
      180              185              190
Ala Val His His Glu
      195

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<210> 4261

<211> 461

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4261

Met Ser Arg Glu Gly Ala Gly Ala Ala Leu Val Ala Glu Val Ile Lys  
 1 5 10 15  
 Asp Arg Leu Cys Phe Ala Ile Leu Tyr Ser Arg Pro Lys Ser Ala Ser  
 20 25 30  
 Asn Val His Tyr Phe Ser Ile Asp Asn Glu Leu Glu Tyr Glu Asn Phe  
 35 40 45  
 Tyr Ala Asp Phe Gly Pro Leu Asn Leu Ala Met Val Tyr Arg Tyr Cys  
 50 55 60  
 Cys Lys Ile Asn Lys Lys Leu Lys Ser Ile Thr Met Leu Arg Lys Lys  
 65 70 75 80  
 Ile Val His Phe Thr Gly Ser Asp Gln Arg Lys Gln Ala Asn Ala Ala  
 85 90 95  
 Phe Leu Val Gly Cys Tyr Met Val Ile Tyr Leu Gly Arg Thr Pro Glu  
 100 105 110  
 Glu Ala Tyr Arg Ile Leu Ile Phe Gly Glu Thr Ser Tyr Ile Pro Phe  
 115 120 125  
 Arg Asp Ala Ala Tyr Gly Ser Cys Asn Phe Tyr Ile Thr Leu Leu Asp  
 130 135 140  
 Cys Phe His Ala Val Lys Lys Ala Met Gln Tyr Gly Phe Leu Asn Phe  
 145 150 155 160  
 Asn Ser Phe Asn Leu Asp Glu Tyr Glu His Tyr Glu Lys Ala Glu Asn  
 165 170 175  
 Gly Asp Leu Asn Trp Ile Ile Pro Asp Arg Phe Ile Ala Phe Cys Gly  
 180 185 190  
 Pro His Ser Arg Ala Arg Leu Glu Ser Gly Tyr His Gln His Ser Pro  
 195 200 205  
 Glu Thr Tyr Ile Gln Tyr Phe Lys Asn His Asn Val Thr Thr Ile Ile  
 210 215 220  
 Arg Leu Asn Lys Arg Met Tyr Asp Ala Lys Arg Phe Thr Asp Ala Gly  
 225 230 235 240  
 Phe Asp His His Asp Leu Phe Phe Ala Asp Gly Ser Thr Pro Thr Asp  
 245 250 255  
 Ala Ile Val Lys Glu Phe Leu Asp Ile Cys Glu Asn Ala Glu Gly Ala  
 260 265 270  
 Ile Ala Val His Cys Lys Ala Gly Leu Gly Arg Thr Gly Thr Leu Ile

|   |     |     |
|---|-----|-----|
| 275   | 280 | 285 |
| Ala Cys Tyr Ile Met Lys His Tyr Arg Met Thr Ala Ala Glu Thr Ile |     |     |
| 290   | 295 | 300 |
| Ala Trp Val Arg Ile Cys Arg Pro Gly Ser Val Ile Gly Pro Gln Gln |     |     |
| 305   | 310 | 315 |
| Gln Phe Leu Val Met Lys Gln Thr Asn Leu Trp Leu Glu Gly Asp Tyr |     |     |
| 325   | 330 | 335 |
| Phe Arg Gln Lys Leu Lys Gly Gln Glu Asn Gly Gln His Arg Ala Ala |     |     |
| 340   | 345 | 350 |
| Phe Ser Lys Leu Leu Ser Gly Val Asp Asp Ile Ser Ile Asn Gly Val |     |     |
| 355   | 360 | 365 |
| Glu Asn Gln Asp Gln Gln Glu Pro Glu Pro Tyr Ser Asp Asp Asp Glu |     |     |
| 370   | 375 | 380 |
| Ile Asn Gly Val Thr Gln Gly Asp Arg Leu Arg Ala Leu Lys Ser Arg |     |     |
| 385   | 390 | 395 |
| Arg Gln Ser Lys Thr Asn Ala Ile Pro Leu Thr Val Ile Leu Gln Ser |     |     |
| 405   | 410 | 415 |
| Ser Val Gln Ser Cys Lys Thr Ser Glu Pro Asn Ile Ser Gly Ser Ala |     |     |
| 420   | 425 | 430 |
| Gly Ile Thr Lys Arg Thr Thr Arg Ser Ala Ser Arg Lys Ser Ser Val |     |     |
| 435   | 440 | 445 |
| Lys Ser Leu Ser Ile Ser Arg Thr Lys Thr Val Leu Arg             |     |     |
| 450   | 455 | 460 |

&lt;210&gt; 4262

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4262

|   |
|---|
| Met Pro Ala Val Ser Lys Gly Asp Gly Met Arg Gly Leu Ala Val Phe |
| 1 5 10 15   |
| Ile Ser Asp Ile Arg Asn Cys Lys Ser Lys Glu Ala Glu Ile Lys Arg |
| 20 25 30  |
| Ile Asn Lys Glu Leu Ala Asn Ile Arg Ser Lys Phe Lys Gly Asp Lys |

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Ala Leu Asp Gly Tyr Ser Lys Lys Lys Tyr Val Cys Lys Leu Leu Phe |     |     |
| 50  | 55  | 60  |
| Ile Phe Leu Leu Gly His Asp Ile Asp Phe Gly His Met Glu Ala Val |     |     |
| 65  | 70  | 75  |
| Asn Leu Leu Ser Ser Asn Lys Tyr Thr Glu Lys Gln Ile Gly Tyr Leu |     |     |
| 85  | 90  | 95  |
| Phe Ile Ser Val Leu Val Asn Ser Asn Ser Glu Leu Ile Arg Leu Ile |     |     |
| 100   | 105 | 110 |
| Asn Asn Ala Ile Lys Asn Asp Leu Ala Ser Arg Asn Pro Thr Phe Met |     |     |
| 115   | 120 | 125 |
| Cys Leu Ala Leu His Cys Ile Ala Asn Val Gly Ser Arg Glu Met Gly |     |     |
| 130   | 135 | 140 |
| Glu Ala Phe Ala Ala Asp Ile Pro Arg Ile Leu Val Ala Gly Asp Ser |     |     |
| 145   | 150 | 155 |
| Met Asp Ser Val Lys Gln Ser Ala Ala Leu Cys Leu Leu Arg Leu Tyr |     |     |
| 165   | 170 | 175 |
| Lys Ala Ser Pro Asp Leu Val Pro Met Gly Glu Trp Thr Ala Arg Val |     |     |
| 180   | 185 | 190 |
| Val His Leu Leu Asn Asp Gln His Met Gly Val Val Thr Ala Ala Val |     |     |
| 195   | 200 | 205 |
| Ser Leu Ile Thr Cys Leu Cys Lys Lys Asn Pro Asp Asp Phe Lys Thr |     |     |
| 210   | 215 | 220 |
| Cys Val Ser Leu Ala Val Ser Arg Leu Ser Arg Ile Val Ser Ser Ala |     |     |
| 225   | 230 | 235 |
| Ser Thr Asp Leu Gln Asp Tyr Thr Tyr Tyr Phe Val Pro Ala Pro Trp |     |     |
| 245   | 250 | 255 |
| Leu Ser Val Lys Leu Leu Arg Leu Leu Gln Cys Tyr Leu Asn Tyr His |     |     |
| 260   | 265 | 270 |
| Ser Pro Val Arg Gly Phe His Ile Trp Trp Glu Pro Ser Pro Thr Ala |     |     |
| 275   | 280 | 285 |
| His Ser His Asn Ser Gln Cys Val                                 |     |     |
| 290   | 295 |     |

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4263

```

Met Val Ser Lys Ser Ala Val Asp Phe Gly Leu Glu Glu His Lys His
  1              5              10              15
Asn Leu Tyr Pro Lys Leu Phe Tyr Pro Phe Ala Asn Phe Leu Leu Leu
      20              25              30
Asp Leu Ser Thr Lys Ser Val Val Leu Leu Leu Ser Leu Gln Leu Val
      35              40              45
Ser Val His Ala Val Gln Leu Leu Ile Thr Ser Gly Leu Trp Ala Gly

      50              55              60
Ser Lys Asn Leu Lys Leu Ile Met Leu Asp Ser Gly Ala Ser Val Gly
  65              70              75              80
Leu His Ile Val Tyr Phe Pro Pro Ser Pro Ser Ala Thr Ala Val Leu
      85              90              95
Gly Arg Asp Ser Phe Phe Pro Leu Trp Leu Val Leu Glu Asn Cys Met
      100              105              110
Gly Tyr Arg
      115

```

&lt;210&gt; 4264

&lt;211&gt; 307

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4264

```

Met Pro Ser Leu Leu Gly Ala Pro Pro Tyr Ser Gly Leu Gly Gly Val
  1              5              10              15
Gly Asp Pro Tyr Ala Pro Leu Met Val Leu Met Cys Arg Val Cys Leu
      20              25              30
Glu Asp Lys Pro Ile Lys Pro Leu Pro Cys Cys Lys Lys Ala Val Cys
      35              40              45

```

Glu Glu Cys Leu Lys Val Tyr Leu Ser Ala Gln Val Gln Leu Gly Gln  
 50 55 60  
 Val Glu Ile Lys Cys Pro Ile Thr Glu Cys Phe Glu Phe Leu Glu Glu  
 65 70 75 80  
 Thr Thr Val Val Tyr Asn Leu Thr His Glu Asp Ser Ile Lys Tyr Lys  
 85 90 95  
 Tyr Phe Leu Glu Leu Gly Arg Ile Asp Ser Ser Thr Lys Pro Cys Pro  
 100 105 110  
 Gln Cys Lys His Phe Thr Thr Phe Lys Lys Lys Gly His Ile Pro Thr  
 115 120 125  
 Pro Ser Arg Ser Glu Ser Lys Tyr Lys Ile Gln Cys Pro Thr Cys Gln  
 130 135 140  
 Phe Val Trp Cys Phe Lys Cys His Ser Pro Trp His Glu Gly Val Asn  
 145 150 155 160  
 Cys Lys Glu Tyr Lys Lys Gly Asp Lys Leu Leu Arg His Trp Ala Ser  
 165 170 175  
 Glu Ile Glu His Gly Gln Arg Asn Ala Gln Lys Cys Pro Lys Cys Lys  
 180 185 190  
 Ile His Ile Gln Arg Thr Glu Gly Cys Asp His Met Thr Cys Ser Gln  
 195 200 205  
 Cys Asn Thr Asn Phe Cys Tyr Arg Cys Gly Glu Arg Tyr Arg Gln Leu  
 210 215 220  
 Arg Phe Phe Gly Asp His Thr Ser Asn Leu Ser Ile Phe Gly Cys Lys  
 225 230 235 240  
 Tyr Arg Tyr Leu Pro Glu Arg Pro His Leu Arg Arg Leu Val Arg Gly  
 245 250 255  
 Ser Val Cys Ala Gly Lys Leu Phe Ile Ala Pro Leu Ile Met Val Leu  
 260 265 270  
 Gly Leu Ala Leu Gly Ala Ile Ala Val Val Ile Gly Leu Phe Val Phe  
 275 280 285  
 Pro Ile Tyr Cys Leu Cys Lys Lys Gln Arg Lys Arg Ser Arg Thr Gly  
 290 295 300  
 Met His Trp  
 305

&lt;210&gt; 4265

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4265

```

Met Ser Arg Arg Gly Thr Trp Gly Gly Thr Pro Arg Asp Ala Gly Leu
  1             5             10             15
Cys Glu Pro Pro Ala Ser Ala Leu Thr Asn Gly Asp Leu Leu Pro His
          20             25             30
Phe Ala Leu Ile Asn Phe Lys Gln Leu Lys Asp Cys Pro Ser Tyr Gly
      35             40             45
Phe Trp Phe Val Phe Leu Val Val Ser Val Val Val Glu Thr Ala Glu
      50             55             60
Val Leu Gly Asp Ser Leu Gly Phe Gly Ala Gly His Gly Glu Gly Thr
      65             70             75             80
Gly Lys Arg Trp Gly Leu Phe Leu Phe Val Thr Tyr Arg Thr Glu Thr
          85             90             95
Ser Ser Val Asn Cys Tyr Pro Trp Gly Leu Leu His Pro Gly Val Arg
          100             105             110
Pro Pro Ala Cys Leu Val Pro Cys Pro Ser Pro Arg Ser Arg Ala Gly
          115             120             125
His Leu Arg Gly
      130

```

&lt;210&gt; 4266

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4266

```

Met Val Ala Phe Val Gln Ala Arg Ala Gly Leu Met Asp Val Leu Val
  1             5             10             15

```



Ser Pro Thr Val Gly Cys Gln Leu Ser Arg Pro Thr Gly Arg Asn Ile  
                   20                                  25                                  30  
 Arg Leu Ser Ser Ser Leu Thr Pro Asp Thr Arg Pro Gln Trp Ala Cys  
                   35                                  40                                  45  
 Thr Gly Pro Gln Lys Val Ser Leu Gly Phe Ala Phe Leu Val Ser Ile  
                   50                                  55                                  60  
 Thr Val Lys Glu Ala Leu Ile Glu Gln Leu Gln Cys Thr Trp Ser Ser  
                   65                                  70                                  75                                  80  
 Ala Ser Ala Gly His Leu Glu Ile Gly Thr Val Met Val Pro Ala Leu  
                                   85                                  90                                  95  
 Lys Glu Leu Met Thr Trp Trp Gly Pro Val Val Phe Lys Glu Pro Arg  
                   100                                  105                                  110  
 Ser His Trp Ala Pro Lys Val Glu Leu Lys Asp Trp Gly Gln Leu Ala  
                   115                                  120                                  125  
 Leu Ser Leu Pro Pro Leu His Cys Leu Pro Leu Lys Asn Pro Thr Pro  
                   130                                  135                                  140  
 Pro His Asp Gly Pro Leu Cys Ser Pro Cys Ile Ser Val Thr Val Asn  
                   145                                  150                                  155                                  160

<210> 4267

<211> 270

<212> PRT

<213> Homo sapiens

<400> 4267

Met Ser Ser Thr Gln Phe Asn Lys Gly Pro Ser Tyr Gly Leu Ser Ala  
           1                                  5                                  10                                  15  
 Glu Val Lys Asn Arg Leu Leu Ser Lys Tyr Asp Pro Gln Lys Glu Ala  
                   20                                  25                                  30  
 Glu Leu Arg Thr Trp Ile Glu Gly Leu Thr Gly Leu Ser Ile Gly Pro  
                   35                                  40                                  45  
 Asp Phe Gln Lys Gly Leu Lys Asp Gly Thr Ile Leu Cys Thr Leu Met  
                   50                                  55                                  60  
 Asn Lys Leu Gln Pro Gly Ser Val Pro Lys Ile Asn Arg Ser Met Gln  
                   65                                  70                                  75                                  80

Asn Trp His Gln Leu Glu Asn Leu Ser Asn Phe Ile Lys Ala Met Val  
                     85                    90                    95  
 Ser Tyr Gly Met Asn Pro Val Asp Leu Phe Glu Ala Asn Asp Leu Phe  
                     100                    105                    110  
 Glu Ser Gly Asn Met Thr Gln Val Gln Val Ser Leu Leu Ala Leu Ala  
                     115                    120                    125  
 Gly Lys Met Gly Thr Asn Lys Cys Ala Ser Gln Ser Gly Met Thr Ala  
                     130                    135                    140  
 Tyr Gly Thr Arg Arg His Leu Tyr Asp Pro Lys Asn His Ile Leu Pro  
 145                    150                    155                    160  
 Pro Met Asp His Ser Thr Ile Ser Leu Gln Met Gly Thr Asn Lys Cys  
                     165                    170                    175  
 Ala Ser Gln Val Gly Met Thr Ala Pro Gly Thr Arg Arg His Ile Tyr  
                     180                    185                    190  
 Asp Thr Lys Leu Gly Thr Asp Lys Cys Asp Asn Ser Ser Met Ser Leu  
                     195                    200                    205  
 Gln Met Gly Tyr Thr Gln Gly Ala Asn Gln Ser Gly Gln Val Phe Gly  
                     210                    215                    220  
 Leu Gly Arg Gln Ile Tyr Asp Pro Lys Tyr Cys Pro Gln Gly Thr Val  
 225                    230                    235                    240  
 Ala Asp Gly Ala Pro Ser Gly Thr Gly Asp Cys Pro Asp Pro Gly Glu  
                     245                    250                    255  
 Val Pro Glu Tyr Pro Pro Tyr Tyr Gln Glu Glu Ala Gly Tyr  
                     260                    265                    270

<210> 4268

<211> 410

<212> PRT

<213> Homo sapiens

<400> 4268

Met Gly Asn Val Val Thr Cys Glu Leu Ser Val Glu Lys Val Cys Asp  
                     1                    5                    10                    15  
 Glu Asp Gly Glu Ala Lys Glu Leu Asp Tyr Gln Ala Thr Leu Leu Glu  
                     20                    25                    30

Asp Gln Ala Pro Ala His Phe His Arg Asn Phe Pro Glu Gln Val Phe  
 35 40 45  
 Gln Asp Leu Gln Arg Lys Ser Pro Glu Ser Glu Ile Leu Ser Leu His  
 50 55 60  
 Leu Leu Val Glu Glu Leu Arg Leu Asn Pro Asp Gly Val Glu Thr Val  
 65 70 75 80  
 Asn Asp Thr Lys Pro Glu Leu Asn Val Ala Ser Ser Glu Gly Gly Glu  
 85 90 95  
 Met Glu Arg Arg Asp Ser Asp Ser Phe Leu Asn Ile Phe Pro Glu Lys  
 100 105 110  
 Gln Val Thr Lys Ala Gly Asn Thr Glu Pro Val Leu Glu Glu Trp Ile  
 115 120 125  
 Pro Val Leu Gln Arg Pro Ser Arg Thr Ala Ala Val Pro Thr Val Lys  
 130 135 140  
 Asp Ala Leu Asp Ala Ala Leu Pro Ser Pro Glu Glu Gly Thr Ser Ile  
 145 150 155 160  
 Ala Ala Val Pro Ala Pro Glu Gly Thr Ala Val Val Ala Ala Leu Val  
 165 170 175  
 Pro Phe Pro His Glu Asp Ile Leu Val Ala Ser Ile Val Ser Leu Glu  
 180 185 190  
 Glu Glu Asp Val Thr Ala Ala Ala Val Ser Ala Pro Glu Arg Ala Thr  
 195 200 205  
 Val Pro Ala Val Thr Val Ser Val Pro Glu Gly Thr Ala Ala Val Ala  
 210 215 220  
 Ala Val Ser Ser Pro Glu Glu Thr Ala Pro Ala Val Ala Ala Ala Ile  
 225 230 235 240  
 Thr Gln Glu Gly Met Ser Ala Val Ala Gly Phe Ser Pro Glu Trp Ala  
 245 250 255  
 Ala Leu Ala Ile Thr Val Pro Ile Thr Glu Glu Asp Gly Thr Pro Glu  
 260 265 270  
 Gly Pro Val Thr Pro Ala Thr Thr Val His Ala Pro Glu Glu Pro Asp  
 275 280 285  
 Thr Ala Ala Val Arg Val Ser Thr Pro Glu Glu Pro Ala Ser Pro Ala  
 290 295 300  
 Ala Ala Val Pro Thr Pro Glu Glu Pro Thr Ser Pro Ala Ala Ala Val  
 305 310 315 320

Pro Thr Pro Glu Glu Pro Thr Ser Pro Ala Ala Ala Val Pro Pro Pro  
                   325                  330                  335  
 Glu Glu Pro Thr Ser Pro Ala Ala Ala Val Pro Thr Pro Glu Glu Pro  
                   340                  345                  350  
 Thr Ser Pro Ala Ala Ala Val Pro Thr Pro Glu Glu Pro Thr Ser Pro  
                   355                  360                  365  
 Ala Ala Ala Val Pro Thr Pro Glu Glu Pro Thr Ser Pro Ala Ala Ala  
                   370                  375                  380  
 Val Pro Thr Pro Glu Glu Pro Ala Ser Pro Ala Ala Ala Val Pro Thr  
 385                  390                  395                  400  
 Pro Glu Ile Gln Cys Gly Trp Trp Gly Trp  
                   405                  410

<210> 4269

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4269

Met Leu Val Leu Ala Trp Lys Leu Asp Ala Gln Asn Met Gly Tyr Phe  
   1                  5                  10                  15  
 Thr Leu Gln Glu Trp Leu Lys Gly Met Thr Ser Leu Gln Cys Asp Thr  
                   20                  25                  30  
 Thr Glu Lys Leu Arg Asn Thr Leu Asp Tyr Leu Arg Ser Phe Leu Asn  
                   35                  40                  45  
 Asp Ser Thr Asn Phe Lys Leu Ile Tyr Arg Tyr Ala Phe Asp Phe Ala  
                   50                  55                  60  
 Arg Gln Ser Lys Tyr Lys Val Ile Asn Lys Asp Gln Trp Cys Asn Val  
   65                  70                  75                  80  
 Leu Glu Phe Ser Arg Thr Ile Asn Leu Asp Leu Ser Asn Tyr Asp Glu  
                   85                  90                  95  
 Asp Gly Ala Trp Pro Val Leu Leu Asp Glu Phe Val Glu Trp Tyr Lys  
                   100                  105                  110  
 Asp Lys Gln Met Ser

115

&lt;210&gt; 4270

&lt;211&gt; 630

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4270

```

Met Val Val Val Ile Ala Val Ser Val Tyr Cys Tyr Trp Arg Lys Ser
  1             5             10             15
Gln Gln Ala Glu Arg Glu Tyr Glu Lys Ile Lys Ser Gln Leu Glu Gly
      20             25             30
Leu Glu Glu Ser Val Arg Asp Arg Cys Lys Lys Glu Phe Thr Asp Leu
      35             40             45
Met Ile Glu Met Glu Asp Gln Thr Asn Asp Val His Glu Ala Gly Ile
      50             55             60
Pro Val Leu Asp Tyr Lys Thr Tyr Thr Asp Arg Val Phe Phe Leu Pro
      65             70             75             80
Ser Lys Asp Gly Asp Lys Asp Val Met Ile Thr Gly Lys Leu Asp Ile
      85             90             95
Pro Glu Pro Arg Arg Pro Val Val Glu Gln Ala Leu Tyr Gln Phe Ser
      100            105            110
Asn Leu Leu Asn Ser Lys Ser Phe Leu Ile Asn Phe Ile His Thr Leu
      115            120            125
Glu Asn Gln Arg Glu Phe Ser Ala Arg Ala Lys Val Tyr Phe Ala Ser
      130            135            140
Leu Leu Thr Val Ala Leu His Gly Lys Leu Glu Tyr Tyr Thr Asp Ile

145            150            155            160
Met His Thr Leu Phe Leu Glu Leu Leu Glu Gln Tyr Val Val Ala Lys
      165            170            175
Asn Pro Lys Leu Met Leu Arg Arg Ser Glu Thr Val Val Glu Arg Met
      180            185            190
Leu Ser Asn Trp Met Ser Ile Cys Leu Tyr Gln Tyr Leu Lys Asp Ser

```

|                                     |                                     |     |
|-------------------------------------|-------------------------------------|-----|
| 195                                 | 200                                 | 205 |
| Ala Gly Glu Pro Leu Tyr Lys         | Leu Phe Lys Ala Ile Lys His Gln Val |     |
| 210                                 | 215                                 | 220 |
| Glu Lys Gly Pro Val Asp Ala Val     | Gln Lys Lys Ala Lys Tyr Thr Leu     |     |
| 225                                 | 230                                 | 235 |
| Asn Asp Thr Gly Leu Leu Gly Asp Asp | Val Glu Tyr Ala Pro Leu Thr         |     |
| 245                                 | 250                                 | 255 |
| Val Ser Val Ile Val Gln Asp Glu Gly | Val Asp Ala Ile Pro Val Lys         |     |
| 260                                 | 265                                 | 270 |
| Val Leu Asn Cys Asp Thr Ile Ser Gln | Val Lys Glu Lys Ile Ile Asp         |     |
| 275                                 | 280                                 | 285 |
| Gln Val Tyr Arg Gly Gln Pro Cys Ser | Cys Trp Pro Arg Pro Asp Ser         |     |
| 290                                 | 295                                 | 300 |
| Val Val Leu Glu Trp Arg Pro Gly Ser | Thr Ala Gln Ile Leu Ser Asp         |     |
| 305                                 | 310                                 | 315 |
| Leu Asp Leu Thr Ser Gln Arg Glu Gly | Arg Trp Lys Arg Val Asn Thr         |     |
| 325                                 | 330                                 | 335 |
| Leu Ile His Tyr Asn Val Arg Asp Gly | Ala Thr Leu Ile Leu Ser Lys         |     |
| 340                                 | 345                                 | 350 |
| Val Gly Val Ser Gln Gln Pro Glu Asp | Ser Gln Gln Asp Leu Pro Gly         |     |
| 355                                 | 360                                 | 365 |
| Glu Arg His Ala Leu Leu Glu Glu Glu | Asn Arg Val Trp His Leu Val         |     |
| 370                                 | 375                                 | 380 |
| Arg Pro Thr Asp Glu Val Asp Glu Gly | Lys Ser Lys Arg Gly Ser Val         |     |
| 385                                 | 390                                 | 395 |
| Lys Glu Lys Glu Arg Thr Lys Ala Ile | Thr Glu Ile Tyr Leu Thr Arg         |     |
| 405                                 | 410                                 | 415 |
| Leu Leu Ser Val Lys Gly Thr Leu Gln | Gln Phe Val Asp Asn Phe Phe         |     |
| 420                                 | 425                                 | 430 |
| Gln Ser Val Leu Ala Pro Gly His Ala | Val Pro Pro Ala Val Lys Tyr         |     |
| 435                                 | 440                                 | 445 |
| Phe Phe Asp Phe Leu Asp Glu Gln Ala | Glu Lys His Asn Ile Gln Asp         |     |
| 450                                 | 455                                 | 460 |
| Glu Asp Thr Ile His Ile Trp Lys Thr | Asn Ser Leu Pro Leu Arg Phe         |     |
| 465                                 | 470                                 | 475 |
| Trp Val Asn Ile Leu Lys Asn Pro His | Phe Ile Phe Asp Val His Val         |     |

|   |     |     |     |
|---|-----|-----|-----|
|   | 485 | 490 | 495 |
| His Glu Val Val Asp Ala Ser Leu Ser Val Ile Ala Gln Thr Phe Met |     |     |     |
| 500   | 505 | 510 |     |
| Asp Ala Cys Thr Arg Thr Glu His Lys Leu Ser Arg Asp Ser Pro Ser |     |     |     |
| 515   | 520 | 525 |     |
| Asn Lys Leu Leu Tyr Ala Lys Glu Ile Ser Thr Tyr Lys Lys Met Val |     |     |     |
| 530   | 535 | 540 |     |
| Glu Asp Tyr Tyr Lys Gly Ile Arg Gln Met Val Gln Val Ser Asp Gln |     |     |     |
| 545   | 550 | 555 | 560 |
| Asp Met Asn Thr His Leu Ala Glu Ile Ser Arg Ala His Thr Asp Ser |     |     |     |
| 565   | 570 | 575 |     |
| Leu Asn Thr Leu Val Ala Leu His Gln Leu Tyr Gln Tyr Thr Gln Lys |     |     |     |
| 580   | 585 | 590 |     |
| Tyr Tyr Asp Glu Ile Ile Asn Ala Leu Glu Glu Asp Pro Ala Ala Gln |     |     |     |
| 595   | 600 | 605 |     |
| Lys Met Gln Leu Ala Phe Arg Leu Gln Gln Ile Ala Ala Ala Leu Glu |     |     |     |
| 610   | 615 | 620 |     |
| Asn Lys Val Thr Asp Leu   |     |     |     |
| 625   | 630 |     |     |

&lt;210&gt; 4271

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4271

|   |    |    |    |
|---|----|----|----|
| Met Gly His Gly Asp Gly Asp Met Gly Pro Cys Arg Leu His Lys Ala |    |    |    |
| 1   | 5  | 10 | 15 |
| Lys Trp Lys Ser Arg Phe Phe Thr Val Asn Val Gly Arg Pro Phe Phe |    |    |    |
| 20  | 25 | 30 |    |
| Phe Pro Gly Cys Leu Thr Tyr Tyr Cys Arg Ser Ala His Ile His Ser |    |    |    |
| 35  | 40 | 45 |    |
| Phe Pro Ser Val Leu Trp Gln Asp Asp Ile Ile Asp Asp Val Asp Ser |    |    |    |
| 50  | 55 | 60 |    |
| Phe Leu Ala Ala Ala Glu Thr Leu Lys Glu Arg Gly Ala Tyr Lys Ile |    |    |    |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Phe | Val | Met | Ala | Thr | His | Gly | Leu | Leu | Ser | Ser | Asp | Ala | Pro | Arg | Arg |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile | Glu | Glu | Ser | Ala | Ile | Asp | Glu | Val | Val | Val | Thr | Asn | Thr | Ile | Pro |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| His | Glu | Val | Gln | Lys | Leu | Gln | Cys | Pro | Lys | Ile | Lys | Thr | Val | Asp | Ile |
|     |     |     | 115 |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ser | Met | Ile | Leu | Ser | Glu | Ala | Ile | Arg | Arg | Ile | His | Asn | Gly | Glu | Ser |
|     |     |     | 130 |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Met | Ser | Tyr | Leu | Phe | Arg | Asn | Ile | Gly | Leu | Asp | Asp |     |     |     |     |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     |     |

&lt;210&gt; 4272

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4272

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Val | Gly | Trp | Arg | Gly | Ala | Val | Cys | Pro | Ala | Ser | Arg | Pro | Arg |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly | Gly | His | Ser | Pro | Gln | Ala | Ile | Leu | Gly | Ser | Lys | Asn | Trp | Pro | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Met | Cys | Leu | Arg | Leu | Ser | Pro | Arg | Gln | Gln | His | His | Gln | Arg | Gly |
|     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |
| Thr | Ser | Leu | Ser | Trp | Gly | Ser | His | Val | Glu | Leu | Tyr | Leu | Glu | Gln | Ile |
|     |     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Val | Asn | Arg | Gly | Ala | Cys | Gln | Phe | Thr | Phe | Ile | Arg | Thr | Arg | Phe | Phe |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |     |
| Ser | Leu | Pro | Asp | Leu | Pro | Cys | Lys | Ser | His | Gly | Gly | Val | Gly | Ile | Lys |
|     |     |     | 85  |     |     |     |     |     |     | 90  |     |     |     | 95  |     |
| Glu | Lys | Arg | Ala | Tyr | Leu | Asp | Phe | His | Asp | Leu | Ser | Val | Asn | Asp | Ser |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     | 110 |     |     |
| Tyr | Pro | Gly | Trp | Arg | Phe | Leu | Ala | Pro | Phe | Leu | Ala | Leu | Asp | Pro | Met |
|     |     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |
| Thr | Pro | Ser | Met | Ile | Phe | Phe | Lys | Val | Gln |     |     |     |     |     |     |



130

135

&lt;210&gt; 4273

&lt;211&gt; 522

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4273

Met Met Gly His Arg Pro Val Leu Val Leu Ser Gln Asn Thr Lys Arg  
 1 5 10 15  
 Glu Ser Gly Arg Lys Val Gln Ser Gly Asn Ile Asn Ala Ala Lys Thr  
 20 25 30  
 Ile Ala Asp Ile Ile Arg Thr Cys Leu Gly Pro Lys Ser Met Met Lys  
 35 40 45  
 Met Leu Leu Asp Pro Met Gly Gly Ile Val Met Thr Asn Asp Gly Asn  
 50 55 60  
 Ala Ile Leu Arg Glu Ile Gln Val Gln His Pro Ala Ala Lys Ser Met  
 65 70 75 80  
 Ile Glu Ile Ser Arg Thr Gln Asp Glu Glu Val Gly Asp Gly Thr Thr  
 85 90 95  
 Thr Val Val Ile Ser Ala Tyr Arg Lys Ala Leu Asp Asp Met Ile Ser  
 100 105 110  
 Thr Leu Lys Lys Ile Ser Ile Pro Val Asp Ile Ser Asp Ser Asp Met  
 115 120 125  
 Met Leu Asn Ile Ile Asn Ser Ser Ile Thr Thr Lys Ala Ile Ser Arg  
 130 135 140  
 Trp Ser Ser Leu Ala Cys Asn Ile Ala Leu Asp Ala Val Lys Met Val  
 145 150 155 160  
 Gln Phe Glu Glu Asn Gly Arg Lys Glu Ile Asp Ile Lys Lys Tyr Ala  
 165 170 175  
 Arg Val Glu Lys Ile Pro Gly Gly Ile Ile Glu Asp Ser Cys Val Leu  
 180 185 190  
 Arg Gly Val Met Ile Asn Lys Asp Val Thr His Pro Arg Met Arg Arg  
 195 200 205  
 His Ile Lys Asn Pro Arg Ile Val Leu Leu Asp Ser Ser Leu Glu Tyr

|   |     |     |     |
|---|-----|-----|-----|
| 210   | 215 | 220 |     |
| Lys Lys Gly Glu Ser Gln Thr Asp Ile Glu Ile Thr Arg Glu Glu Asp |     |     |     |
| 225   | 230 | 235 | 240 |
| Phe Thr Arg Ile Leu Gln Met Glu Glu Glu Tyr Ile Gln Gln Leu Cys |     |     |     |
| 245   | 250 | 255 |     |
| Glu Asp Ile Ile Gln Leu Lys Pro Asp Val Val Ile Thr Glu Lys Gly |     |     |     |
| 260   | 265 | 270 |     |
| Ile Ser Asp Leu Ala Gln His Tyr Leu Met Arg Ala Asn Ile Thr Ala |     |     |     |
| 275   | 280 | 285 |     |
| Ile Arg Arg Val Arg Lys Thr Asp Asn Asn Arg Ile Ala Arg Ala Cys |     |     |     |
| 290   | 295 | 300 |     |
| Gly Ala Arg Ile Val Ser Arg Pro Glu Glu Leu Arg Glu Asp Asp Val |     |     |     |
| 305   | 310 | 315 | 320 |
| Gly Thr Gly Ala Gly Leu Leu Glu Ile Lys Lys Ile Gly Asp Glu Tyr |     |     |     |
| 325   | 330 | 335 |     |
| Phe Thr Phe Ile Thr Asp Cys Lys Asp Pro Lys Ala Cys Thr Ile Leu |     |     |     |
| 340   | 345 | 350 |     |
| Leu Arg Gly Ala Ser Lys Glu Ile Leu Ser Glu Val Glu Arg Asn Leu |     |     |     |
| 355   | 360 | 365 |     |
| Gln Asp Ala Met Gln Val Cys Arg Asn Val Leu Leu Asp Pro Gln Leu |     |     |     |
| 370   | 375 | 380 |     |
| Val Pro Gly Gly Gly Ala Ser Glu Met Ala Val Ala His Ala Leu Thr |     |     |     |
| 385   | 390 | 395 | 400 |
| Glu Lys Ser Lys Ala Met Thr Gly Val Glu Gln Trp Pro Tyr Arg Ala |     |     |     |
| 405   | 410 | 415 |     |
| Val Ala Gln Ala Leu Glu Val Ile Pro Arg Thr Leu Ile Gln Asn Cys |     |     |     |
| 420   | 425 | 430 |     |
| Gly Ala Ser Thr Ile Arg Leu Leu Thr Ser Leu Arg Ala Lys His Thr |     |     |     |
| 435   | 440 | 445 |     |
| Gln Glu Asn Cys Glu Thr Trp Gly Val Asn Gly Glu Thr Gly Thr Leu |     |     |     |
| 450   | 455 | 460 |     |
| Val Asp Met Lys Glu Leu Gly Ile Trp Glu Pro Leu Ala Val Lys Leu |     |     |     |
| 465   | 470 | 475 | 480 |
| Gln Thr Tyr Lys Thr Ala Val Glu Thr Ala Val Leu Leu Leu Arg Ile |     |     |     |
| 485   | 490 | 495 |     |
| Asp Asp Ile Val Ser Gly His Lys Lys Lys Gly Asp Asp Gln Ser Arg |     |     |     |

500                      505                      510  
 Gln Gly Gly Ala Pro Asp Ala Gly Gln Glu  
 515                      520

<210> 4274

<211> 191

<212> PRT

<213> Homo sapiens

<400> 4274

Met Ser Ser Thr Leu Gly Lys Leu Ser Asn Gln Val Glu Glu Thr Leu  
 1                      5                      10                      15  
 Pro Leu Leu Lys Lys Pro Leu Lys Arg Ala Ile Thr Thr Leu Met Ala  
 20                      25                      30  
 Gly Ile Leu Arg Leu Val Val Gln Trp Pro Pro Gly Arg Leu Gln Thr  
 35                      40                      45  
 Val Thr Lys Gly Val Glu Ser Leu Ile Cys Thr Asp Trp Ile Arg His  
 50                      55                      60  
 Lys Phe Thr Arg Ser Arg Ile Pro Glu Lys Ala Phe Gln Ala Ser Pro  
 65                      70                      75                      80  
 Glu Asp His Glu Lys Tyr Gly Gly Asp Pro Gln Asn Pro His Lys Leu  
 85                      90                      95  
 His Ile Val Thr Arg Ile Lys Ser Thr Arg Arg Arg Pro Tyr Trp Glu  
 100                      105                      110  
 Lys Asp Ile Ile Lys Met Leu Gly Leu Glu Lys Ala His Thr Pro Gln  
 115                      120                      125  
 Val His Lys Asn Ile Pro Ser Val Asn Ala Lys Leu Lys Val Val Lys  
 130                      135                      140  
 His Leu Ile Arg Ile Lys Pro Leu Lys Leu Pro Gln Gly Leu Pro Thr  
 145                      150                      155                      160  
 Glu Glu Asn Met Ser Asn Thr Cys Leu Lys Ser Thr Gly Glu Leu Val  
 165                      170                      175  
 Val Gln Trp His Leu Lys Pro Val Glu Gln Lys Ala His Glu Ser  
 180                      185                      190

&lt;210&gt; 4275

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4275

```

Met Leu Asp Ile Leu Val Tyr Glu Glu Gln Gln Gln Ala Ala Ala Gly
 1             5             10             15
Glu Ala Gly Pro Cys Leu Glu Tyr Leu Leu Gln His Lys Ile Leu Glu
             20             25             30
Thr Leu Cys Thr Leu Gly Lys Ala Glu Val Gly Gly Pro Leu Arg Ala
             35             40             45
Gly Pro Gly Arg Gly Gly Arg Pro Leu Arg Ala Trp Pro Gly Arg Gly
             50             55             60
Gly Arg Pro Leu Cys Ala Gly Pro Gly Arg Gly Gly Arg Pro Ser Glu
             65             70             75             80
Cys Trp Ala Arg Leu Arg Trp Ala Val Gly Ser Gly Gln Pro Gly Ala
             85             90             95
Pro Trp Ile Pro Gly Leu Ser Ala Tyr Ala Leu Pro Ser Pro Asp Thr
             100            105            110
Glu Ser Gly Ser Ser Gly Glu Arg Ser Lys Gln Asp Gly His Cys Gly
             115            120            125
Cys Leu Thr
             130

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&lt;210&gt; 4276

&lt;211&gt; 357

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4276

```

Met Phe Cys Tyr Lys Trp Arg Arg Arg Arg Thr Thr Thr Met Gly Ile
 1             5             10             15

```

Ser Glu Glu Phe Asn Gly Lys Pro Asp Ser Leu Phe Phe Asn Asp Gly  
 20 25 30  
 Gln Arg Arg Ile Asp Phe Val Leu Val Tyr Glu Asp Glu Ser Arg Lys  
 35 40 45  
 Glu Thr Asn Lys Lys Gly Thr Asn Glu Lys Gln Arg Arg Lys Arg Gln  
 50 55 60  
 Ala Tyr Glu Ser Asn Leu Ile Cys His Gly Leu Gln Leu Glu Ala Thr  
 65 70 75 80  
 Arg Ser Val Leu Asp Asp Lys Leu Val Phe Val Lys Val His Ala Pro  
 85 90 95  
 Trp Glu Val Leu Cys Thr Tyr Ala Glu Ile Met His Ile Lys Leu Pro  
 100 105 110  
 Leu Lys Pro Asn Asp Leu Lys Asn Arg Ser Ser Ala Phe Gly Thr Leu  
 115 120 125  
 Asn Trp Phe Thr Lys Val Leu Ser Val Asp Glu Ser Ile Ile Lys Pro  
 130 135 140  
 Glu Gln Glu Phe Phe Thr Ala Pro Phe Glu Lys Asn Arg Met Asn Asp  
 145 150 155 160  
 Phe Tyr Ile Val Asp Arg Asp Ala Phe Phe Asn Pro Ala Thr Arg Ser  
 165 170 175  
 Arg Ile Val Tyr Phe Ile Leu Ser Arg Val Lys Tyr Gln Val Ile Asn  
 180 185 190  
 Asn Val Ser Lys Phe Gly Ile Asn Arg Leu Val Asn Ser Gly Ile Tyr  
 195 200 205  
 Lys Ala Ala Phe Pro Leu His Asp Cys Lys Phe Arg Arg Gln Ser Glu  
 210 215 220  
 Asp Pro Ser Cys Pro Asn Glu Arg Cys Leu Leu Tyr Arg Glu Trp Ala  
 225 230 235 240  
 His Pro Arg Ser Ile Tyr Lys Lys Gln Pro Leu Asp Leu Ile Arg Lys  
 245 250 255  
 Tyr Tyr Gly Glu Lys Ile Gly Ile Tyr Phe Ala Trp Leu Gly Tyr Tyr  
 260 265 270  
 Thr Gln Met Leu Leu Leu Ala Ala Val Val Gly Val Ala Cys Phe Leu  
 275 280 285  
 Tyr Gly Tyr Leu Asn Gln Asp Asn Cys Thr Trp Ser Lys Glu Val Cys  
 290 295 300

His Pro Asp Ile Gly Gly Lys Ile Ile Met Cys Pro Gln Cys Asp Arg  
 305                      310                      315                      320  
 Leu Cys Pro Phe Trp Lys Leu Asn Ile Thr Cys Glu Ser Ser Lys Lys  
                     325                      330                      335  
 Leu Cys Ile Phe Asp Ser Phe Gly Thr Leu Val Phe Ala Val Phe Met  
                     340                      345                      350  
 Gly Val Trp Asp Pro  
                     355

<210> 4277

<211> 113

<212> PRT

<213> Homo sapiens

<400> 4277

Met Pro Gln Leu Gly Phe Val Pro Ile Leu Phe Cys Leu Cys Arg Lys  
 1                      5                      10                      15  
 Ser Val Ser Asn His Ser Gly Pro Val Gln Cys Phe Trp Met Lys Gln  
                     20                      25                      30  
 Asn Cys Glu Thr His Thr Ala Leu Ser Thr Cys Leu Pro Trp Gly Glu  
                     35                      40                      45  
 Ser His Ile Asn Ile Ile Val Ser Tyr Leu His Ile Tyr Pro Cys Ser  
                     50                      55                      60  
 Cys Gly Trp Gln Gln Pro Arg Asp Lys Arg Gln Ile Lys Ser Ala Arg  
 65                      70                      75                      80  
 Val Ser Leu Ala Arg Lys Gly Arg Val Gln Val Thr Leu Lys Gly Gln  
                     85                      90                      95  
 Glu Thr His Ser Arg Trp Gly Ile Pro Gly Val Pro Gly Ile Gly Pro  
                     100                      105                      110  
 Glu

<210> 4278

<211> 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4278

Met Pro Ala Phe Ser Val Pro Cys Ser Arg Thr Val Asn Ser Phe Leu  
 1 5 10 15  
 Ser Leu Phe Ser Tyr Ser Cys Leu Ile Asn Asp Ser Ala Ile Asn Cys  
 20 25 30  
 Asp Glu Cys Phe Arg Phe Met Trp Ser Ile Lys Arg Asp Tyr Thr Ser  
 35 40 45  
 Trp Asn Phe Val Ala Ile Ser Gln Ala Ser Glu Ile Val Tyr Leu Ser  
 50 55 60  
 Ile Ser Pro Glu Glu Ser Lys Ile Ile Asp Gly Val Trp Ile Gln Lys  
 65 70 75 80  
 Arg Asp Tyr Phe Ser Leu Ser Leu Arg Leu Leu Asp Ser Ile Leu Gln  
 85 90 95  
 Ser Val Met Asp His Ile  
 100

&lt;210&gt; 4279

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4279

Met Val Ser Asn Thr Cys Cys Arg Leu His Val Glu Leu Ser Leu Ile  
 1 5 10 15  
 Ser Pro Arg Val Gly Met Ser Arg Gly Gly Leu Met Phe Leu Pro Leu  
 20 25 30  
 Thr Leu Leu Ser Ser Pro Gly Gln Asp Phe Glu Trp Arg Val Trp Gly  
 35 40 45  
 Ile Leu Leu Ala Val Ala Leu Gly Thr Leu Ala Thr Pro Phe Ala Leu  
 50 55 60  
 Pro Cys Val Val Gly Gln Tyr Leu Glu Trp Ser Gly Gln Thr Arg Glu  
 65 70 75 80

Thr Tyr Arg Arg Ser Arg Gly His Ser Asp Ala His Arg Pro Leu Ser  
                     85                    90                    95  
 Val Gly Arg Leu Gly Cys Asp Leu Phe Arg Arg Ser Gly Val His Thr  
                     100                    105                    110  
 Val

<210> 4280

<211> 102

<212> PRT

<213> Homo sapiens

<400> 4280

Met Lys Thr Gly Arg Ser His Thr Leu Arg Ser Glu Ala Gln Gly His  
     1                    5                    10                    15  
 His Lys Pro Gly Arg His Glu Ala Arg Pro Glu Arg His Arg Gln Ala  
                     20                    25                    30  
 Glu Glu Trp Thr Glu Glu Gln Gln Arg Ser Leu Glu Asp Glu Ser Gln  
                     35                    40                    45  
 Leu Cys Lys Glu Leu Pro Arg Val Phe Leu Pro Gln Lys Phe His Leu  
                     50                    55                    60  
 Ala Thr Glu Met Ala Leu Ala Leu Gly Gln Glu Arg Gly Gly Asp Glu  
                     65                    70                    75                    80  
 Leu Leu Met Ala Met Thr Phe Ser Gln His Val Leu Pro Val Leu Pro  
                     85                    90                    95  
 Arg Val Glu Met Pro Leu  
                     100

<210> 4281

<211> 169

<212> PRT

<213> Homo sapiens

<400> 4281



Met His Ala Asp Pro Ala Ala Pro Arg Gly Cys His Arg Phe Pro Pro  
 1 5 10 15  
 Ser Gln Thr Gln His Thr Leu Pro Ala Trp Arg Cys Ala Ala Pro Ser  
 20 25 30  
 Leu Trp Ser Arg Val Trp Gln Ser Ala His Gln Phe Leu Leu Leu Pro  
 35 40 45  
 Trp Asp Leu Pro Ala Phe Ser Thr Ala Ile His Ser Ala Asn Trp Asp  
 50 55 60  
 Cys Trp Ser Pro Tyr Leu Ala Ala Ser Asp Lys Val Arg Ala Thr Pro  
 65 70 75 80  
 Gly Arg Glu Asp Thr Cys Gly Glu Asn Ser Cys Val Ile Tyr Phe Ser  
 85 90 95  
 Phe Gly Ile Gly Cys Leu Gln Arg Phe Met Gly Gly Gly Gly Leu Met  
 100 105 110  
 Leu Arg Ala Gln Lys Phe Gln Gly His Leu Gly Arg Pro Asp Ile Gln  
 115 120 125  
 Arg Pro Ser Arg Cys Ala Cys Ser Met Tyr Gln Gly Arg Arg Phe Ser  
 130 135 140  
 Gln Gln Gly Trp Cys His Trp His Asp Arg Pro Ala Leu Ala Glu Arg  
 145 150 155 160  
 Ser Pro Val Phe Gly Val Gln Pro Pro  
 165

&lt;210&gt; 4282

&lt;211&gt; 285

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4282

Met Phe Thr Ser Gln Gln Trp Lys His Leu Ser Asn Asp Phe Leu Lys  
 1 5 10 15  
 Thr Gln Gln Glu Lys Arg His Ser Trp Phe Lys Ala Ser Gly Thr Ile  
 20 25 30  
 Lys Lys Phe Arg Ala Gly Leu Ser Ile Phe Ser Pro Ile Pro Lys Ser  
 35 40 45

Pro Ser Phe Pro Ile Ile Gln Asp Ser Met Leu Lys Gly Lys Leu Gly  
 50 55 60  
 Val Pro Glu Leu Arg Val Gly Arg Leu Met Asn Arg Ser Ile Ser Cys  
 65 70 75 80  
 Thr Met Lys Asn Pro Lys Val Glu Val Phe Gly Tyr Pro Pro Ser Pro  
 85 90 95  
 Gln Val Ser Gly His Cys Lys Asn Ile Pro Thr Leu Glu Tyr Gly Phe  
 100 105 110  
 Leu Val Gln Ile Met Lys Tyr Ala Glu Gln Arg Ile Pro Thr Leu Asn  
 115 120 125  
 Glu Tyr Cys Val Val Cys Asp Glu Gln His Val Phe Gln Asn Gly Ser  
 130 135 140  
 Met Leu Lys Pro Ala Val Cys Thr Arg Glu Leu Cys Val Phe Ser Phe  
 145 150 155 160  
 Tyr Thr Leu Gly Val Met Ser Gly Ala Ala Glu Glu Val Ala Thr Gly  
 165 170 175  
 Ala Glu Val Val Asp Leu Leu Val Ala Met Cys Arg Ala Ala Leu Glu  
 180 185 190  
 Ser Pro Arg Arg Ser Ile Ile Phe Glu Pro Tyr Pro Ser Val Val Asp  
 195 200 205  
 Pro Thr Asp Pro Lys Thr Leu Ala Phe Asn Pro Lys Lys Lys Asn Tyr  
 210 215 220  
 Glu Arg Leu Gln Lys Ala Leu Asp Ser Val Met Ser Ile Arg Glu Met  
 225 230 235 240  
 Thr Gln Gly Ser Tyr Leu Glu Ile Lys Lys Gln Met Asp Lys Leu Asp  
 245 250 255  
 Pro Leu Ala His Pro Leu Leu Gln Trp Ile Ile Ser Ser Asn Arg Ser  
 260 265 270  
 His Ile Val Lys Leu Pro Leu Ser Arg Trp Val Pro His  
 275 280 285

<210> 4283

<211> 121

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4283

Met Pro Arg Gly Val Gln Ile Lys Lys Arg Ala Cys Ala Gln Met Trp  
 1 5 10 15  
 Ala Gln Val Ser Gln Arg Gly Lys Ser Ser Phe Trp Pro Ser Leu Gln  
 20 25 30  
 His Ala Leu Gly Pro Ser Asn Ile Ser Lys Ile Arg Lys Glu Leu Phe  
 35 40 45  
 Ser Ser His Gln Tyr Leu Leu Cys Phe Gln Thr Ile Phe Phe Ala Asn  
 50 55 60  
 Leu Pro Cys Gln Cys Ser Val Pro Pro Cys Pro His Thr Ser Ser Ala  
 65 70 75 80  
 Gly Arg Ala Ala Leu Glu Thr Val Leu Ser Ile Pro Cys Gly Glu Arg  
 85 90 95  
 Gly Thr Ala Ala Pro Leu Val Ser Ala Glu Ile Gln Ser Ser Ile Ser  
 100 105 110  
 Ser Leu Lys Gly Asp Phe Leu His Thr  
 115 120

&lt;210&gt; 4284

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4284

Met Ile Asn Glu Ser Gly Thr Glu Leu Gln Asp Lys Tyr Cys Tyr Arg  
 1 5 10 15  
 Ala Ser Pro Ala Ala Gln Ile Thr Gly Lys Ile Ser Pro Arg Leu Phe  
 20 25 30  
 Ile Ser Pro Leu Pro Pro Trp Pro Ser Gly Ser Ser Gln Gln Ser Arg  
 35 40 45  
 Ile His Pro Ser Pro Phe Pro Arg Pro His Pro Ser Leu Ser Ser Gln  
 50 55 60  
 Arg Thr Ala Gly Glu Arg Gly Met Gln Ile Gly Pro Gly Ala Gly Gly  
 65 70 75 80

Pro Leu Cys Leu Ala Ala Leu Cys Leu Pro Ala Gln Leu Trp Arg Gln  
                     85                    90                    95  
 Pro Arg Gly Ala Gly Met Val Arg Val Met Leu Phe Ser Val Val Asp  
                     100                    105                    110  
 Glu Cys Leu Ala Leu Gln Thr  
                     115

<210> 4285

<211> 169

<212> PRT

<213> Homo sapiens

<400> 4285

Met Asn Ser Cys Arg Glu Gln Cys Pro Phe His Gly Trp Ala His Ser  
   1                    5                    10                    15  
 Trp His Gln Leu Ser Trp Ser Asn Gly Asn Pro Ile Tyr Cys Thr Arg  
                     20                    25                    30  
 Asp Thr Phe Cys Gly Asp Ser Glu Met Gln Arg Asp Gln Ile Thr Ser  
                     35                    40                    45  
 Arg Lys Gly Arg Ala Trp Cys Glu Gly Thr Arg Leu Thr Asp Ile Pro  
                     50                    55                    60  
 Asp Asp Lys Pro Val Gly Pro Ser Gly Ser Leu Pro Pro Ala Ser His  
                     65                    70                    75                    80  
 Ser Gly Glu Gly Pro Val Ile Glu Ala Val Gly Ile Pro Glu Glu Arg  
                     85                    90                    95  
 Thr Gln Gln Lys Gln Val Glu Gly Val Gly Gln Arg Ala Asp Leu Pro  
                     100                    105                    110  
 Pro Ala Thr Leu Ser Tyr Cys Ser Ser Arg Gly Asn Asn Leu Gly Gly  
                     115                    120                    125  
 Cys His Glu Gly Phe Ser Gly Ala Pro Phe Pro Trp Gly Leu Met Glu  
                     130                    135                    140  
 Gly Gly Asn Cys Val Asn Val Val Trp Trp Lys Lys Gln Ala Trp Ser  
                     145                    150                    155                    160  
 Ala His Arg Leu Gly Val Pro Arg Ile  
                     165

&lt;210&gt; 4286

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4286

```

Met Cys Ala Ser Thr Ser Arg Arg Ser Ser Thr Trp Pro Gln Pro Ala
  1              5              10              15
Trp Arg Gln Arg Ala Gly Ala Lys Ser Gln Arg Ser Arg Cys Ser Gly
      20              25              30
Ser Cys Cys Ser Leu Thr Ala Arg Pro Gln Pro Arg Val Ala Tyr Ala
      35              40              45
His Leu Met Ser Ser Leu Arg Ile Arg Arg Leu Ser Gly Arg Thr Trp
      50              55              60
Leu Ser Ser Leu Ala Asp Arg Arg Pro Arg Gln Arg Ala Gly Gln Leu
  65              70              75              80
Pro Ser Cys Thr Thr Gln Gly Ser Thr Gln Pro Ala Gln Lys Thr Trp
      85              90              95
Pro His Gly Val Val Ser Gly Ser Ser Arg Thr Leu Trp His Ser Ala
      100             105             110
His Phe Arg Ser Gly Ser Thr Ser Pro Ser Lys Arg Ser Ser Ser Lys
      115             120             125
Pro Met Val Ala Ala Arg Pro Arg Gly Arg Arg Arg Ala Ala Gly Arg
      130             135             140
Pro Leu Pro Pro His Glu Ala Ala Gln Thr Gly Arg Leu Arg Arg Pro
      145             150             155             160
Arg Ala Arg Trp Leu Ser Pro Asp
      165

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&lt;210&gt; 4287

&lt;211&gt; 495

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4287

Met His His Trp Cys Ile Pro Phe Ser Val Asp Gly Gln Pro Ala Pro  
 1 5 10 15  
 Ser Leu Arg Trp Leu Phe Asn Gly Ser Val Leu Asn Glu Thr Ser Phe  
 20 25 30  
 Ile Phe Thr Glu Phe Leu Glu Pro Ala Ala Asn Glu Thr Val Arg His  
 35 40 45  
 Gly Cys Leu Arg Leu Asn Gln Pro Thr His Val Asn Asn Gly Asn Tyr  
 50 55 60  
 Thr Leu Leu Ala Ala Asn Pro Phe Gly Gln Ala Ser Ala Ser Ile Met  
 65 70 75 80  
 Ala Ala Phe Met Asp Asn Pro Phe Glu Phe Asn Pro Glu Asp Pro Ile  
 85 90 95  
 Pro Asp Thr Asn Ser Thr Ser Gly Asp Pro Val Glu Lys Lys Asp Glu  
 100 105 110  
 Thr Pro Phe Gly Val Ser Val Ala Val Gly Leu Ala Val Phe Ala Cys  
 115 120 125  
 Leu Phe Leu Ser Thr Leu Leu Leu Val Leu Asn Lys Cys Gly Arg Arg  
 130 135 140  
 Asn Lys Phe Gly Ile Asn Arg Pro Ala Val Leu Ala Pro Glu Asp Gly  
 145 150 155 160  
 Leu Ala Met Ser Leu His Phe Met Thr Leu Gly Gly Ser Ser Leu Ser  
 165 170 175  
 Pro Thr Glu Gly Lys Gly Ser Gly Leu Gln Gly His Ile Ile Glu Asn  
 180 185 190  
 Pro Gln Tyr Phe Ser Asp Ala Cys Val His His Ile Lys Arg Arg Asp  
 195 200 205  
 Ile Val Leu Lys Trp Gly Leu Gly Glu Gly Ala Phe Gly Lys Val Phe  
 210 215 220  
 Leu Ala Glu Cys His Asn Leu Leu Pro Glu Gln Asp Lys Met Leu Val  
 225 230 235 240  
 Ala Val Lys Ala Leu Lys Glu Ala Ser Glu Ser Ala Arg Gln Asp Phe  
 245 250 255  
 Gln Arg Glu Ala Glu Leu Leu Thr Met Leu Gln His Gln His Ile Val

|   |     |     |
|---|-----|-----|
| 260   | 265 | 270 |
| Arg Phe Phe Gly Val Cys Thr Glu Gly Arg Pro Leu Leu Met Val Phe |     |     |
| 275   | 280 | 285 |
| Glu Tyr Met Arg His Gly Asp Leu Asn Arg Phe Leu Arg Ser His Gly |     |     |
| 290   | 295 | 300 |
| Pro Asp Ala Lys Leu Leu Ala Gly Gly Glu Asp Val Ala Pro Gly Pro |     |     |
| 305   | 310 | 315 |
| Leu Gly Leu Gly Gln Leu Leu Ala Val Ala Ser Gln Val Ala Ala Gly |     |     |
| 325   | 330 | 335 |
| Met Val Tyr Leu Ala Gly Leu His Phe Val His Arg Asp Leu Ala Thr |     |     |
| 340   | 345 | 350 |
| Arg Asn Cys Leu Val Gly Gln Gly Leu Val Val Lys Ile Gly Asp Phe |     |     |
| 355   | 360 | 365 |
| Gly Met Ser Arg Asp Ile Tyr Ser Thr Asp Tyr Tyr Arg Val Gly Gly |     |     |
| 370   | 375 | 380 |
| Arg Thr Met Leu Pro Ile Arg Trp Met Pro Pro Glu Ser Ile Leu Tyr |     |     |
| 385   | 390 | 395 |
| Arg Lys Phe Thr Thr Glu Ser Asp Val Trp Ser Phe Gly Val Val Leu |     |     |
| 405   | 410 | 415 |
| Trp Glu Ile Phe Thr Tyr Gly Lys Gln Pro Trp Tyr Gln Leu Ser Asn |     |     |
| 420   | 425 | 430 |
| Thr Glu Ala Ile Asp Cys Ile Thr Gln Gly Arg Glu Leu Glu Arg Pro |     |     |
| 435   | 440 | 445 |
| Arg Ala Cys Pro Pro Glu Val Tyr Ala Ile Met Arg Gly Cys Trp Gln |     |     |
| 450   | 455 | 460 |
| Arg Glu Pro Gln Gln Arg His Ser Ile Lys Asp Val His Ala Arg Leu |     |     |
| 465   | 470 | 475 |
| Gln Ala Leu Ala Gln Ala Pro Pro Val Tyr Leu Asp Val Leu Gly     |     |     |
| 485   | 490 | 495 |

&lt;210&gt; 4288

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4288

Met Pro Ile Leu Gln Ala Leu Cys Leu Leu Pro Lys Val Ser Thr Pro  
 1 5 10 15  
 Ser Ile Thr Val Pro Ser Pro Gln Arg Ser Ala Ala Leu Ser Ile Thr  
 20 25 30  
 Val Pro Ser Pro Gln Arg Ser Ala Ala Pro Ser Ile Thr Val Pro Ser  
 35 40 45  
 Pro Gln Arg Ser Ala Pro Arg Ala Ser Leu Cys Pro Pro His Lys Gly  
 50 55 60  
 Gln His Pro Glu His His Cys Ala Leu Pro Pro Lys Gly Gln His Pro  
 65 70 75 80  
 Glu His His Cys Ala Leu Pro Thr Lys Val Ser Thr Pro Ser Ile Thr  
 85 90 95  
 Val Pro Ser Pro Gln Arg Ser Pro Gln Met Ser Leu Ser Ser Ala Ala  
 100 105 110  
 Arg Gly Ser Asn Thr Asp Val Ala Gly Leu Ser Val Gly Glu Trp Pro  
 115 120 125  
 Gly Trp Gln Leu Trp Gly Glu Gly Gln Asp Gly Ala Gln Gln Arg Pro  
 130 135 140  
 His Leu Pro Ser Gly Gly Ser Gly Ala Gly Val Ala Pro Gln Arg Leu  
 145 150 155 160  
 Pro Lys Ser Arg Ala Cys Ile Leu Cys Ser Arg His Gly Ala Gln Gly  
 165 170 175  
 Pro Trp Val Thr Gly Arg Ser Val Ser His Ser His Cys Pro Ile Gln  
 180 185 190  
 Gly Leu Leu Asp Leu Gln Arg Pro Asp Leu Gly Thr Asp Trp Gly Arg  
 195 200 205  
 Thr Arg Pro Leu Cys Thr Pro Gln Asp Leu Cys Gly Gly Arg Pro Leu  
 210 215 220  
 Pro Ser Thr Trp Gly Val Thr Met His Leu Ile His Cys Leu Ser Val  
 225 230 235 240  
 Ser Leu Ser Leu Cys Leu Ser Leu Ser His Cys Val  
 245 250

&lt;210&gt; 4289



&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4289

```

Met Met Phe Leu Met Asn Thr Ser Pro Cys Pro Phe Phe Phe Phe Phe
 1             5             10             15
Arg Trp Ser Leu Ala Leu Ser Pro Arg Leu Glu Cys Ser Gly Thr Ile
      20             25             30
Ser Gly His Cys Asn Leu Arg Pro Pro Ala Ser Ser Asp Ser Pro Val
      35             40             45
Ser Ala Ser Arg Val Ala Arg Ile Thr Gly Ala Arg His Gln Ala Trp
      50             55             60
Leu Ile Phe Ile Phe Leu Val Glu Met Gly Phe Cys Leu Val Gly Gln
      65             70             75             80
Ala Gly Leu Lys Leu Leu Thr Ser Gly Asp Pro Ser Thr Leu Ala Ser
      85             90             95
Gln Ser Ala Gly Thr Thr Gly Val Ser His His Ala Trp Ser Pro Thr
      100            105            110
Cys

```

&lt;210&gt; 4290

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4290

```

Met Ser Tyr Gly Arg Pro Pro Pro Asp Val Glu Gly Met Thr Ser Leu
 1             5             10             15
Lys Val Asp Asn Leu Thr Tyr Arg Thr Ser Pro Asp Thr Leu Arg Arg
      20             25             30
Val Phe Glu Lys Tyr Gly Arg Val Gly Asp Val Tyr Ile Pro Arg Asp
      35             40             45
Arg Tyr Thr Lys Glu Ser Arg Gly Phe Ala Phe Val Arg Gly Pro Gly

```

50                      55                      60  
 Pro Gly Leu Gly Pro Gly Val Leu Pro Gln Cys Pro Arg Gly Asn Pro  
 65                      70                      75                      80  
 Asn Pro Gly Arg Asp Arg Arg Val Pro Pro Ser Leu Leu Lys Arg Lys  
                     85                      90                      95  
 Glu Arg Cys Pro Leu Lys Lys Met Val Met Ser Gly Asn Pro Arg His  
                     100                      105                      110  
 Ile Thr Leu Ile His Lys Trp Asp Leu Gly  
                     115                      120

<210> 4291

<211> 372

<212> PRT

<213> Homo sapiens

<400> 4291

Met Glu Pro Gly Arg Arg Gly Ala Ala Ala Leu Leu Ala Leu Leu Cys  
 1                      5                      10                      15  
 Val Ala Cys Ala Leu Arg Ala Gly Arg Ala Gln Tyr Glu Arg Tyr Ser  
                     20                      25                      30  
 Phe Arg Ser Phe Pro Arg Asp Glu Leu Met Pro Leu Glu Ser Ala Tyr  
                     35                      40                      45  
 Arg His Ala Leu Asp Lys Tyr Ser Gly Glu His Trp Ala Glu Ser Val  
                     50                      55                      60  
 Gly Tyr Leu Glu Ile Ser Leu Arg Leu His Arg Leu Leu Arg Leu Phe  
 65                      70                      75                      80  
 Gly Gly Leu Leu Arg Arg Ala His Cys Leu Lys Arg Cys Lys Gln Gly  
                     85                      90                      95  
 Leu Pro Ala Phe Arg Gln Ser Gln Pro Ser Arg Glu Val Leu Ala Asp  
                     100                      105                      110  
 Phe Gln Arg Arg Glu Pro Tyr Lys Phe Leu Gln Phe Ala Tyr Phe Lys  
                     115                      120                      125  
 Ala Asn Asn Leu Pro Lys Ala Ile Ala Ala Ala His Thr Phe Leu Leu  
                     130                      135                      140  
 Lys His Pro Asp Asp Glu Met Met Lys Arg Asn Met Ala Tyr Tyr Lys

145                      150                      155                      160  
 Ser Leu Pro Gly Ala Glu Asp Tyr Ile Lys Asp Leu Glu Thr Lys Ser  
                          165                      170                      175  
 Tyr Glu Ser Leu Phe Ile Arg Ala Val Arg Ala Tyr Asn Gly Glu Asn  
                          180                      185                      190  
 Trp Arg Thr Ser Ile Thr Asp Met Glu Leu Ala Leu Pro Asp Phe Phe  
                          195                      200                      205  
 Lys Ala Phe Tyr Glu Cys Leu Ala Ala Cys Glu Gly Ser Arg Glu Ile

210                      215                      220  
 Lys Asp Phe Lys Asp Phe Tyr Leu Ser Ile Ala Asp His Tyr Val Glu  
 225                      230                      235                      240  
 Val Leu Glu Cys Lys Ile Gln Cys Glu Glu Asn Leu Thr Pro Val Ile  
                          245                      250                      255  
 Gly Gly Tyr Pro Val Glu Lys Phe Val Ala Thr Met Tyr His Tyr Leu  
                          260                      265                      270  
 Gln Phe Ala Tyr Tyr Lys Leu Asn Asp Leu Lys Asn Ala Ala Pro Cys  
                          275                      280                      285  
 Ala Val Ser Tyr Leu Leu Phe Asp Gln Asn Asp Lys Val Met Gln Gln  
                          290                      295                      300  
 Asn Leu Val Tyr Tyr Gln Tyr His Arg Asp Thr Trp Gly Leu Ser Asp  
 305                      310                      315                      320  
 Glu His Phe Gln Pro Arg Pro Glu Ala Val Gln Phe Phe Asn Val Thr  
                          325                      330                      335  
 Thr Leu Gln Lys Glu Leu Tyr Asp Phe Ala Lys Glu Asn Ile Met Asp  
                          340                      345                      350  
 Asp Asp Glu Gly Glu Val Val Glu Tyr Val Asp Asp Leu Leu Glu Leu  
                          355                      360                      365  
 Glu Glu Thr Ser  
 370

<210> 4292

<211> 230

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4292

Met Arg Val Phe Ile Gln Ile Cys Phe Ser Tyr Phe Leu Val Asp Ser  
 1 5 10 15  
 Ala Gly Gln Val Val Ala Asn Gln Glu Gly Val Phe Arg Ser Asn Cys  
 20 25 30  
 Met Asp Cys Leu Asp Arg Thr Asn Val Ile Gln Ser Leu Leu Ala Arg  
 35 40 45  
 Arg Ser Leu Gln Ala Gln Leu Gln Arg Leu Gly Val Leu His Val Gly  
 50 55 60  
 Gln Lys Leu Glu Glu Gln Asp Glu Phe Glu Lys Ile Phe Lys Asn Ala  
 65 70 75 80  
 Trp Ala Asp Asn Ala Asn Ala Cys Ala Lys Gln Tyr Ala Gly Thr Gly  
 85 90 95  
 Ala Leu Lys Thr Asp Phe Thr Arg Thr Gly Lys Arg Thr His Leu Gly  
 100 105 110  
 Leu Ile Met Asp Gly Trp Asn Ser Met Ile Arg Tyr Tyr Lys Asn Asn  
 115 120 125  
 Phe Ser Asp Gly Phe Arg Gln Asp Ser Ile Asp Leu Phe Leu Gly Asn  
 130 135 140  
 Tyr Ser Val Asp Glu Leu Glu Ser His Ser Pro Leu Ser Val Pro Arg  
 145 150 155 160  
 Asp Trp Lys Phe Leu Ala Leu Pro Ile Ile Met Val Val Ala Phe Ser  
 165 170 175  
 Met Cys Ile Ile Cys Leu Leu Met Ala Gly Asp Thr Trp Thr Glu Thr  
 180 185 190  
 Leu Ala Tyr Val Leu Phe Trp Gly Val Ala Ser Ile Gly Thr Phe Phe  
 195 200 205  
 Ile Ile Leu Tyr Asn Gly Lys Asp Phe Val Asp Ala Pro Arg Leu Val  
 210 215 220  
 Gln Lys Glu Lys Ile Asp  
 225 230

&lt;210&gt; 4293

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4293

Met Phe His Leu Gln Pro Arg Glu Ala Gln Lys Ser Ser Ser Ala Leu  
 1 5 10 15  
 Glu Val His Lys Lys Tyr Gly Asp Ser Thr Gly Thr Thr Leu Glu Glu  
 20 25 30  
 Ala Gln Lys Ile Asn Asn Gly Ser Ser Gln Ala Asp Gly Thr Leu Lys  
 35 40 45  
 Pro Val Asp Glu Lys Glu Glu Ala Val Ala Ala Glu Val Gly Trp Met  
 50 55 60  
 Thr Ser Val Lys Asp Trp Ala Gly Val Met Ile Ser Ala Gln Thr Leu  
 65 70 75 80  
 Thr Gly Arg Val Leu Val Val Leu Val Phe Ala Leu Ser Ile Gly Ala  
 85 90 95  
 Leu Val Ile Tyr Phe Ile Asp Ser Ser Lys  
 100 105

&lt;210&gt; 4294

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4294

Met Leu Arg Thr Leu Val Leu Lys Gln Thr Leu Asp Leu Leu Leu Pro  
 1 5 10 15  
 Leu Leu Glu Ala Leu Leu Val Leu Gly Val Pro Gln His Leu Glu Leu  
 20 25 30  
 Gln Pro Leu Pro Val Gln Val Ser Leu Leu Leu Leu Gln Leu Leu Asp  
 35 40 45  
 Leu Gly Ser Leu Lys Ser His Arg Leu His His Phe His Ser Lys Ala  
 50 55 60  
 Leu Gln Leu Pro Val Leu Asp His Leu Asp Phe Gln Asp Phe Gln Leu

|   |     |     |     |
|---|-----|-----|-----|
| 65  | 70  | 75  | 80  |
| Pro Trp Gln Gln Val Leu Ser Glu Leu Gln Trp Pro Gln Pro Leu Glu |     |     |     |
|   | 85  | 90  | 95  |
| Val Ala Val Leu Trp Leu Val Leu Val Val Arg Ala His Ile Leu Thr |     |     |     |
|   | 100 | 105 | 110 |
| Leu Leu Phe Leu Ser His Pro Val Thr Leu Leu Glu Ile Ala Ala Tyr |     |     |     |
|   | 115 | 120 | 125 |
| Pro Leu Leu Cys Gln Pro Gln Ala Ala Ser Leu Gln Gln Ile Met Cys |     |     |     |
|   | 130 | 135 | 140 |
| Tyr Ser His Pro Glu Ile Asp                                     |     |     |     |
| 145   | 150 |     |     |

&lt;210&gt; 4295

&lt;211&gt; 229

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4295

|   |     |     |     |
|---|-----|-----|-----|
| Met Ala Gln Gly Asp Ala Ala Ala Thr Ala Gly His Ala Gln Leu His |     |     |     |
| 1   | 5   | 10  | 15  |
| Cys Gly His Glu Thr Ser Glu Gly Cys Val Ser Pro Pro Gly Val Thr |     |     |     |
|   | 20  | 25  | 30  |
| Val Pro Trp Pro Thr Gln Gly Glu Arg Pro Val Gly Pro Asn Ala Glu |     |     |     |
|   | 35  | 40  | 45  |
| Glu Arg Lys Arg Arg Ala Thr Leu Gln Trp Gly Arg Gly Ala Lys Lys |     |     |     |
|   | 50  | 55  | 60  |
| Gly Pro Arg Asn Pro Thr Pro Glu Asn Ser Arg Arg Leu Gly Arg Gln |     |     |     |
| 65  | 70  | 75  | 80  |
| Gly Ala Leu Val Gln Glu Arg Ser Phe Lys Lys Phe Gly Ala Arg Arg |     |     |     |
|   | 85  | 90  | 95  |
| Ala Leu Asn Ser Pro Val Lys Lys Thr Glu Gln Gln Phe Gly Gly Thr |     |     |     |
|   | 100 | 105 | 110 |
| Arg Leu Pro Gly His Asn Gly Arg Thr Glu Ala Arg Asp Arg Glu Pro |     |     |     |
|   | 115 | 120 | 125 |
| Leu Arg Arg Arg Pro Thr Pro Leu Thr Ile His Arg Phe Pro Gly Gly |     |     |     |

130                      135                      140  
 Glu Ala Pro Lys His Ile Gly Ser Trp Leu Tyr Ser Ala Ala Val Pro  
 145                      150                      155                      160  
 Arg Pro Lys Ser Arg Pro Ala Ser Cys Cys Pro His Ser Leu Arg His  
                     165                      170                      175  
 Arg Pro Leu Thr Ser Ser Pro Arg Ser Ser Gln Ser Cys Cys Gln Leu  
                     180                      185                      190  
 Phe Gly Val His Arg Gln Arg Pro Ile Arg Ala Gly Leu Arg Gly Arg  
                     195                      200                      205  
 His Ala Ser Glu Gly Arg Lys Arg Arg Gly Gly Gly Arg Val Arg Glu  
                     210                      215                      220  
 Pro Arg Arg Leu Gln  
 225

<210> 4296

<211> 125

<212> PRT

<213> Homo sapiens

<400> 4296

Met Cys Pro Arg Leu Ala Glu Val Leu Pro Leu Asn Ala Ala Gly Gln  
   1                      5                      10                      15  
 Asp Ala Thr Leu Ser Thr Ile Ser Ser Val Pro Gly Ile Pro Pro Thr  
                     20                      25                      30  
 His Thr His Ile His Ser Leu Leu Leu Thr Ser Ser His Thr Leu Thr  
                     35                      40                      45  
 His Pro Thr Thr Leu Thr His Phe Gln Asn Pro Pro Thr Leu Thr Leu  
                     50                      55                      60  
 Thr Leu Ala Ser Pro Phe Pro Cys Ser Val Thr Ser Leu Gln Val Pro  
   65                      70                      75                      80  
 Ala Pro His Ser Leu Leu Gln Ser Gln Pro Pro Trp Cys Gln Pro Ser  
                     85                      90                      95  
 Leu Val Pro Ala Ile Ser Pro Lys Tyr Pro Pro Phe Trp Ala Pro Phe  
                     100                      105                      110  
 Cys Pro Glu Gly Pro Glu Val Ser Leu Gly Ser Thr Cys

115

120

125

&lt;210&gt; 4297

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4297

Met Ile Ala Cys Arg Ala Leu Thr Val Leu Thr Trp Thr His Val Arg  
 1 5 10 15  
 Ile Asp Glu Gly His Val Pro Ala Met Phe Ala Gln Ser Ser Val Phe  
 20 25 30  
 Arg Glu Leu Ile Thr Gly Val Ala Lys Ala Thr Gly Ala Thr His Leu  
 35 40 45  
 Leu Ser Cys Phe Gln Val Arg Thr Ala Leu Val Trp Ala Ser Glu Thr  
 50 55 60  
 Ala Arg Trp Ile Leu Gly Val Leu Ser Phe Glu Arg Ser Leu Ile Tyr  
 65 70 75 80  
 His Gln Glu Lys Phe Val Ala Phe Ala Ser Ser Ile Gln Pro Arg Ile  
 85 90 95  
 His Ser Ser Val Leu Trp Gly Asn Gln Gly Cys Gly Ser Thr Gln Glu  
 100 105 110  
 Ser Cys Arg Pro Arg His Phe Leu Gly Asn Ala Leu Leu Arg Trp Arg  
 115 120 125  
 Pro Ala Ala Cys Pro Gly Pro Glu Gly Ser Gly Ser Val Glu Gln Ser  
 130 135 140  
 Trp Gly Leu Gly Ala Gly Arg Tyr Gly Thr Ser Cys Phe Leu Arg Gly  
 145 150 155 160  
 Leu Arg Gly Arg Ala Gly Gly Leu Gly Arg Gly Arg Val Gly Ala Ile  
 165 170 175  
 Asp Met Arg Thr Ser Ser Ser Ser Ser Ala Glu Leu  
 180 185

&lt;210&gt; 4298



&lt;211&gt; 518

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4298

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Met Val Gln Leu Val Leu Gln Tyr Arg Asp Tyr Gln Arg Ala Thr Gln
  1              5              10              15
Arg Leu Ala Gly Ile Pro Glu Leu Leu Asn Lys Leu Arg Gln Ala Pro
      20              25              30
Asp Phe Tyr Val Glu Met Lys Trp Glu Phe Thr Ser Trp Val Pro Leu
      35              40              45
Val Ser Lys Met Cys Pro Ser Asp Val Tyr Arg Val Trp Lys Arg Gly
      50              55              60
Glu Ser Leu Arg Val Asp Thr Ser Leu Leu Gly Phe Glu His Met Thr
      65              70              75              80
Trp Gln Arg Gly Arg Arg Ser Phe Ile Phe Lys Gly Gln Glu Ala Arg
      85              90              95
Ala Leu Val Met Glu Val Asp His Asp Arg Gln Val Val His Val Glu
      100             105             110
Thr Leu Gly Leu Thr Leu Gln Glu Pro Glu Thr Leu Leu Ala Ala Met
      115             120             125
Arg Pro Ser Glu Glu His Val Ala Ser Arg Leu Thr Ser Pro Ile Val
      130             135             140
Ser Thr His Leu Asp Thr Arg Asn Val Ala Phe Glu Arg Asn Lys Cys
      145             150             155             160
Gly Ile Trp Gly Trp Arg Ser Glu Lys Met Glu Thr Val Ser Gly Tyr
      165             170             175
Glu Ala Lys Val Tyr Ser Ala Thr Asn Val Glu Leu Val Thr Arg Thr
      180             185             190
Arg Thr Glu His Leu Ser Asp Gln Asp Lys Ser Arg Ser Lys Ala Gly
      195             200             205
Lys Thr Pro Phe Gln Ser Phe Leu Gly Met Ala Gln Gln His Ser Ser
      210             215             220
His Thr Gly Ala Pro Val Gln Gln Ala Ala Ser Pro Thr Asn Pro Thr
      225             230             235             240
Ala Ile Ser Pro Glu Glu Tyr Phe Asp Pro Asn Phe Ser Leu Glu Ser

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|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 245 |     | 250 |     | 255 |
| Arg Asn Ile Gly Arg Pro Ile Glu Met Ser Ser Lys Val Gln Arg Phe |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Lys Ala Thr Leu Trp Leu Ser Glu Glu His Pro Leu Ser Leu Gly Asp |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Gln Val Thr Pro Ile Ile Asp Leu Met Ala Ile Ser Asn Ala His Phe |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Ala Lys Leu Arg Asp Phe Ile Thr Leu Arg Leu Pro Pro Gly Phe Pro |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| Val Lys Ile Glu Ile Pro Leu Phe His Val Leu Asn Ala Arg Ile Thr |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Phe Ser Asn Leu Cys Gly Cys Asp Glu Pro Leu Ser Ser Val Trp Val |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Pro Ala Pro Ser Ser Ala Val Ala Ala Ser Gly Asn Ser Phe Pro Cys |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Glu Val Asp Pro Thr Val Phe Glu Val Pro Asn Gly Tyr Ser Val Leu |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Gly Met Glu Arg Asn Glu Pro Leu Arg Asp Glu Asp Asp Asp Leu Leu |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Gln Phe Ala Ile Gln Gln Ser Leu Leu Glu Ala Gly Thr Glu Ala Glu |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Gln Val Thr Val Trp Glu Ala Leu Thr Asn Thr Arg Pro Gly Ala Arg |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |
| Pro Pro Pro Gln Ala Thr Val Tyr Glu Glu Gln Leu Gln Leu Glu Arg |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |
| Ala Leu Gln Glu Ser Leu Gln Leu Ser Thr Glu Pro Arg Gly Pro Gly |     |     |     |     |     |
|   | 450 |     | 455 |     | 460 |
| Ser Pro Pro Arg Thr Pro Pro Ala Pro Gly Pro Pro Ser Phe Glu Glu |     |     |     |     |     |
| 465   |     | 470 |     | 475 | 480 |
| Gln Leu Arg Leu Ala Leu Glu Leu Ser Ser Arg Glu Gln Glu Glu Arg |     |     |     |     |     |
|   | 485 |     | 490 |     | 495 |
| Glu Arg Arg Gly Gln Gln Glu Glu Glu Tyr Leu Gln Arg Ile Leu Gln |     |     |     |     |     |
|   | 500 |     | 505 |     | 510 |
| Leu Ser Leu Thr Glu His   |     |     |     |     |     |
|   | 515 |     |     |     |     |

&lt;210&gt; 4299

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4299

Met Pro Gly Val Ser Val Ala Ile Arg Leu Ser Tyr Phe Leu Pro Leu  
 1 5 10 15  
 Lys Leu Pro Pro Asn Thr Pro Gly Gly Leu Leu Pro Trp Ser Thr Leu  
 20 25 30  
 Ala His Pro Leu Arg Asp Pro Arg Ala Ser Gly Gly Tyr Leu Val Glu  
 35 40 45  
 Lys Arg Pro Ser Pro Ser Asp Ala Phe Pro Ser Trp Arg Cys Ser Gly  
 50 55 60  
 Ala Trp Cys His Ala Gly Gly Gly Arg Gly Cys Arg Gly Ala His Ala  
 65 70 75 80  
 Trp Cys Pro Thr Ser Leu Val Leu Val Ser Ser Pro Asn Pro Thr Arg  
 85 90 95  
 Gly Leu Ser Leu Val Trp Asp Arg Leu Gly Lys Cys Gly Ala Ser Met  
 100 105 110  
 Ala Glu Ala Trp Leu Phe Glu Gly Val Thr Leu Gln Ser Leu Ser Gln  
 115 120 125  
 Gly Trp Gly Trp Pro Cys Gly Pro Gly Val Ala Glu Ser Gly Thr Gly  
 130 135 140  
 Val Gln Pro Ser Pro Thr Leu Trp Trp Ser Gly Ala Val Thr Ala Leu  
 145 150 155 160  
 Glu Pro Phe

&lt;210&gt; 4300

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4300

Met Val Ala Arg Leu Pro Thr Pro Lys Leu Pro Arg Trp Leu Arg Val  
 1 5 10 15  
 Leu Thr Pro Arg Thr Pro Thr Pro Phe Cys Gly Pro Ser Ala Arg Trp  
 20 25 30  
 Val Ala His Pro Asp Trp Ala Val Gly Ser Pro Leu Pro Arg Arg Gly  
 35 40 45  
 Gly Thr Arg Gly Arg His Ala Ala Ala Gly Ala Gly Glu Thr Thr Glu  
 50 55 60  
 Lys Glu Pro Ala Gly Gly Arg Lys Arg Pro Arg Pro Arg Pro Met Ala  
 65 70 75 80  
 Ala Gln Ser Leu Asp Arg Gly Phe Leu Glu Gly Ala Trp Asp Pro Cys  
 85 90 95  
 Cys His Cys Leu Arg Leu Gly Ile His Ser Arg Leu Leu Asp Pro Ser  
 100 105 110  
 Leu Gln Pro Arg Trp Asp Pro Cys Leu Leu Pro Leu Leu Pro Leu Ala  
 115 120 125  
 Pro Gly Arg Gly Arg Ala Glu Glu Thr Ser Leu Glu Gln Pro Ser Ala  
 130 135 140  
 Thr His Arg Gln Phe Pro Arg Arg Gly Gly  
 145 150

&lt;210&gt; 4301

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4301

Met Leu Gly Cys Phe Met Asp Leu Leu Ser Ile Leu Met Ile Gln Asp  
 1 5 10 15  
 Ile Leu Ser Met Pro Val Leu Phe Ser Leu Gly Leu Cys Phe His Ser  
 20 25 30  
 Lys Leu Leu Arg Cys Ser Pro Asn Pro Gly Glu Asn Lys Ile His Tyr  
 35 40 45

Gln Ile Gln Gln Val Gln Pro Ser Trp Ser Ser Leu Arg Ser His Arg  
 50 55 60  
 Val Ala Pro Trp Asn Asp Ala Ser Leu Cys Gln Gly Pro Pro Phe Gly  
 65 70 75 80  
 Ile Gly Arg Val Leu Gly Arg Ile Leu His Leu Gln Arg Pro Leu Gly  
 85 90 95  
 Ser Leu Arg Ser Gly Gly Gly Trp Thr Gln Lys Gly Arg Leu Asn Thr  
 100 105 110  
 Arg Trp Gly Arg Lys Asn Val Thr Ile Gly Ser Gln Thr Glu Ala Ser  
 115 120 125  
 Pro Leu Lys Tyr Gly Val Gly Gly Leu Thr Ser Ala Leu Trp Asn Val  
 130 135 140  
 Leu Ser Asp Cys Cys Arg Val Pro Gly Pro Pro  
 145 150 155

<210> 4302

<211> 443

<212> PRT

<213> Homo sapiens

<400> 4302

Met Ser Gln Arg Asp Gly Val Cys Gly Ser His Glu Val Ala Gly Ala  
 1 5 10 15  
 Ala Ser Pro Gly Ala Asp Gly Gly Leu Ser Leu Ala Ala Tyr Cys Lys  
 20 25 30  
 Asn Ser Val Asp Gly Leu Trp Tyr Cys Phe Asp Asp Ser Asp Val Gln  
 35 40 45  
 Gln Leu Ser Glu Asp Glu Val Cys Thr Gln Thr Ala Tyr Ile Leu Phe  
 50 55 60  
 Tyr Gln Arg Arg Thr Ala Ile Pro Ser Trp Ser Ala Asn Ser Ser Val  
 65 70 75 80  
 Ala Gly Ser Thr Ser Ser Ser Leu Cys Glu His Trp Val Ser Arg Leu  
 85 90 95  
 Pro Gly Ser Lys Pro Ala Ser Val Thr Ser Ala Ala Ser Ser Arg Arg  
 100 105 110

Thr Ser Leu Ala Ser Leu Ser Glu Ser Val Glu Met Thr Gly Glu Arg  
 115 120 125  
 Ser Glu Asp Asp Gly Gly Phe Ser Thr Arg Pro Phe Val Arg Ser Val  
 130 135 140  
 Gln Arg Gln Ser Leu Ser Ser Arg Ser Ser Val Thr Ser Pro Leu Ala  
 145 150 155 160  
 Val Asn Glu Asn Cys Met Arg Pro Ser Trp Ser Leu Ser Ala Lys Leu  
 165 170 175  
 Gln Met Arg Ser Asn Ser Pro Ser Arg Phe Ser Gly Asp Ser Pro Ile  
 180 185 190  
 His Ser Ser Ala Ser Thr Leu Glu Lys Ile Gly Glu Ala Ala Asp Asp  
 195 200 205  
 Lys Val Ser Ile Ser Cys Phe Gly Ser Leu Arg Asn Leu Ser Ser Ser  
 210 215 220  
 Tyr Gln Glu Pro Ser Asp Ser His Ser Arg Arg Glu His Lys Ala Val  
 225 230 235 240  
 Gly Arg Ala Pro Leu Ala Val Met Glu Gly Val Phe Lys Asp Glu Ser  
 245 250 255  
 Asp Thr Arg Arg Leu Asn Ser Ser Val Val Asp Thr Gln Ser Lys His  
 260 265 270  
 Ser Ala Gln Gly Asp Arg Leu Pro Pro Leu Ser Gly Pro Phe Asp Asn  
 275 280 285  
 Asn Asn Gln Ile Ala Tyr Val Asp Gln Ser Asp Ser Val Asp Ser Ser  
 290 295 300  
 Pro Val Lys Glu Val Lys Ala Pro Ser His Pro Gly Ser Leu Ala Lys  
 305 310 315 320  
 Lys Pro Glu Ser Thr Thr Lys Arg Ser Pro Ser Ser Lys Gly Thr Ser  
 325 330 335  
 Glu Pro Glu Lys Ser Leu Arg Lys Gly Arg Pro Ala Leu Ala Ser Gln  
 340 345 350  
 Glu Ser Ser Leu Ser Ser Thr Ser Pro Ser Ser Pro Leu Pro Val Lys  
 355 360 365  
 Val Ser Leu Lys Pro Ser Arg Ser Arg Ser Lys Ala Asp Ser Ser Ser  
 370 375 380  
 Arg Gly Ser Gly Arg His Ser Ser Pro Ala Pro Ala Gln Thr Gln Phe  
 385 390 395 400

Pro Ser Gly Glu Pro Gly Pro Ser Arg Gly Gly Gln Gly Gly Arg Glu  
                     405                    410                    415  
 Ala Arg Ala Glu Leu Leu His Gly Gln Pro Ala Leu Pro Gln His Lys  
                     420                    425                    430  
 His Gln Val Trp Phe Glu Glu Gly Gln Gln Val  
                     435                    440

<210> 4303

<211> 156

<212> PRT

<213> Homo sapiens

<400> 4303

Met Tyr Thr Ser Leu His Thr Gln Ile Pro Glu Asn Gly Ile Ala Gly  
   1                    5                    10                    15  
 Leu Tyr Asp Asn Phe Ile Phe Leu Phe Phe Leu Arg Gln Asp Leu Phe  
                     20                    25                    30  
 Leu Ser Pro Arg Leu Gly Cys Gly Gly Ala Ile Met Ala His Cys Ser  
                     35                    40                    45  
 Leu Asp Ile Leu Gly Ser Ser Asn Pro Pro Ile Ser Ala Ser Gln Val  
                     50                    55                    60  
 Ala Gly Thr Thr Gly Thr Cys His Tyr Thr Trp Leu Ile Phe Val Phe  
   65                    70                    75                    80  
 Phe Val Glu Val Gly Ser Pro Tyr Phe Ser Gln Ala Gly Leu Lys Leu  
                     85                    90                    95  
 Leu Ser Ser Asp Asn Ser Leu Thr Ser Ala Ser Gln Ser Val Gly Ile  
                     100                    105                    110  
 Ile Gly Met Ile His His Thr Gln Pro Tyr Leu Ile Phe Asn Ile Leu  
                     115                    120                    125  
 Gly Asn Leu Tyr Pro Asn Phe Leu Gly Gly Cys Ile Ile Leu Phe Tyr  
                     130                    135                    140  
 Gln Gln Cys Met Gly Val Pro Asn Ala Leu His Pro  
   145                    150                    155

&lt;210&gt; 4304

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4304

Met Ser Ser Gly Asn Tyr Gln Gln Ser Glu Ala Leu Ser Lys Pro Thr

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Phe Ser Glu Glu Gln Ala Ser Ala Leu Val Glu Ser Val Phe Gly Leu |     |     |     |
| 20  | 25  | 30  |     |
| Lys Val Ser Lys Val Arg Pro Leu Pro Ser Tyr Asp Asp Gln Asn Phe |     |     |     |
| 35  | 40  | 45  |     |
| His Val Tyr Val Ser Lys Thr Lys Asp Gly Pro Thr Glu Tyr Val Leu |     |     |     |
| 50  | 55  | 60  |     |
| Lys Ile Ser Asn Thr Lys Ala Ser Lys Asn Pro Asp Leu Ile Glu Val |     |     |     |
| 65  | 70  | 75  | 80  |
| Gln Asn His Ile Ile Met Phe Leu Lys Ala Ala Gly Phe Pro Thr Ala |     |     |     |
| 85  | 90  | 95  |     |
| Ser Val Cys His Thr Lys Gly Asp Asn Thr Ala Ser Leu Val Ser Val |     |     |     |
| 100   | 105 | 110 |     |
| Asp Ser Gly Ser Glu Ile Lys Ser Tyr Leu Val Arg Leu Leu Thr Tyr |     |     |     |
| 115   | 120 | 125 |     |
| Leu Pro Gly Arg Pro Ile Ala Glu Leu Pro Val Ser Pro Gln Leu Leu |     |     |     |
| 130   | 135 | 140 |     |
| Tyr Glu Ile Gly Lys Leu Ala Ala Lys Leu Asp Lys Thr Leu Gln Glu |     |     |     |
| 145   | 150 | 155 | 160 |
| Gly Lys Pro Arg Val Thr Pro Leu Leu Ala Lys Asn                 |     |     |     |
| 165   | 170 |     |     |

&lt;210&gt; 4305

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 4305

Met Leu Gln Phe Pro Leu Asp Leu Ala Val Gln Asn Val Val Cys Pro  
 1 5 10 15  
 Val Ser Val Thr Glu Arg Gly Phe Pro Ser Leu Phe Phe Cys Gln Tyr  
 20 25 30  
 Ser Ala Asp Leu Trp Asn Ile Gly Ile Ser Val Phe Ile Gln Asp Gly  
 35 40 45  
 Pro Phe Leu Val Val Arg Leu Ile Leu Met Thr Tyr Phe Lys Val Ile  
 50 55 60  
 Asn Gln Met Leu Val Phe Phe Ala Ala Lys Asn Phe Leu Val Val Val  
 65 70 75 80  
 Leu Gln Leu Tyr Arg Leu Val Val Leu Ala Leu Ala Val Arg Ala Ser  
 85 90 95  
 Leu Arg Ser Gln Ser Glu Gly Leu Lys Gly Glu His Gly Cys Arg Ala  
 100 105 110  
 Gln Thr Ser Glu Ser Gly Pro Ser Gln Arg Asp Trp Gln Asn Glu Ser  
 115 120 125  
 Lys Glu Gly Leu Ala Ile Pro Leu Arg Gly Ser Pro Val Thr Ser Asp  
 130 135 140  
 Asp Ser His His Thr Pro  
 145 150

&lt;210&gt; 4306

&lt;211&gt; 803

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

Met Ala Glu Arg Gly Gly Asp Gly Gly Glu Ser Glu Arg Phe Asn Pro  
 1 5 10 15  
 Gly Glu Leu Arg Met Ala Gln Gln Gln Ala Leu Arg Phe Arg Gly Pro  
 20 25 30  
 Ala Pro Pro Pro Asn Ala Val Met Arg Gly Pro Pro Pro Leu Met Arg  
 35 40 45  
 Pro Pro Pro Pro Phe Gly Met Met Arg Gly Pro Pro Pro Pro Arg

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| 50  | 55  | 60  |     |     |     |
| Pro | Pro | Phe | Gly | Arg | Pro |
| Pro | Pro | Phe | Ile | Leu | Ile |
| Cys | Arg | Gln | Tyr | Leu |     |
| 65  | 70  | 75  | 80  |     |     |
| Gln | Arg | Pro | Pro | Phe | Met |
| Pro | Pro | Pro | Met | Ser | Ser |
| Met | Pro | Pro | Pro | Pro | Pro |
| 85  | 90  | 95  |     |     |     |
| Pro | Gly | Met | Met | Phe | Pro |
| Pro | Pro | Gly | Met | Pro | Pro |
| Val | Thr | Ala | Pro | Gly |     |
| 100 | 105 | 110 |     |     |     |
| Thr | Pro | Ala | Leu | Pro | Pro |
| Thr | Glu | Glu | Ile | Trp | Val |
| Glu | Asn | Lys | Thr |     |     |
| 115 | 120 | 125 |     |     |     |
| Pro | Asp | Gly | Lys | Val | Tyr |
| Tyr | Tyr | Tyr | Asn | Ala | Arg |
| Thr | Arg | Glu | Ser | Ala |     |
| 130 | 135 | 140 |     |     |     |
| Trp | Thr | Lys | Pro | Asp | Gly |
| Val | Lys | Val | Ile | Gln | Gln |
| Ser | Glu | Leu | Thr |     |     |
| 145 | 150 | 155 | 160 |     |     |
| Pro | Met | Leu | Ala | Ala | Gln |
| Ala | Gln | Val | Gln | Ala | Gln |
| Ala | Gln | Ala | Gln | Ala | Gln |
| 165 | 170 | 175 |     |     |     |
| Ala | Gln | Ala | Gln | Ala | Gln |
| Ala | Gln | Ala | Gln | Ala | Gln |
| 180 | 185 | 190 |     |     |     |
| Ala | Gln | Ala | Gln | Ala | Gln |
| Ala | Gln | Ala | Gln | Ala | Gln |
| 195 | 200 | 205 |     |     |     |
| Ala | Gln | Ala | Gln | Ala | Gln |
| Ala | Gln | Ala | Gln | Ala | Gln |
| 210 | 215 | 220 |     |     |     |
| Ala | Gln | Ala | Gln | Val | Gln |
| Ala | Gln | Val | Gln | Ala | Gln |
| Val | Gln | Val | Gln | Ala | Gln |
| 225 | 230 | 235 | 240 |     |     |
| Ala | Val | Gly | Ala | Ser | Thr |
| Pro | Thr | Thr | Ser | Ser | Pro |
| Ala | Pro | Ala | Val |     |     |
| 245 | 250 | 255 |     |     |     |
| Ser | Thr | Ser | Thr | Ser | Ser |
| Ser | Thr | Pro | Ser | Ser | Thr |
| Thr | Thr | Ser | Thr | Thr | Thr |
| 260 | 265 | 270 |     |     |     |
| Thr | Thr | Ala | Thr | Ser | Val |
| Ala | Gln | Thr | Val | Ser | Thr |
| Pro | Thr | Thr | Gln |     |     |
| 275 | 280 | 285 |     |     |     |
| Asp | Gln | Thr | Pro | Ser | Ser |
| Ala | Val | Ser | Val | Ala | Thr |
| Pro | Thr | Val | Ser |     |     |
| 290 | 295 | 300 |     |     |     |
| Val | Ser | Thr | Pro | Ala | Pro |
| Thr | Ala | Thr | Pro | Val | Gln |
| Thr | Val | Pro | Gln |     |     |
| 305 | 310 | 315 | 320 |     |     |
| Pro | His | Pro | Gln | Thr | Leu |
| Pro | Pro | Ala | Val | Pro | His |
| Ser | Val | Pro | Gln |     |     |
| 325 | 330 | 335 |     |     |     |
| Pro | Thr | Thr | Ala | Ile | Pro |
| Ala | Phe | Pro | Pro | Val | Met |
| Val | Pro | Pro | Phe |     |     |

|   |     |     |
|---|-----|-----|
| 340   | 345 | 350 |
| Arg Val Pro Leu Pro Gly Met Pro Ile Pro Leu Pro Gly Val Leu Pro |     |     |
| 355   | 360 | 365 |
| Gly Met Ala Pro Pro Ile Val Pro Met Ile His Pro Gln Val Ala Ile |     |     |
| 370   | 375 | 380 |
| Ala Ala Ser Pro Ala Thr Leu Ala Gly Ala Thr Ala Val Ser Glu Trp |     |     |
| 385   | 390 | 395 |
| Thr Glu Tyr Lys Thr Ala Asp Gly Lys Thr Tyr Tyr Tyr Asn Asn Arg |     |     |
| 405   | 410 | 415 |
| Thr Leu Glu Ser Thr Trp Lys Lys Pro Gln Glu Leu Lys Glu Lys Glu |     |     |
| 420   | 425 | 430 |
| Lys Leu Glu Glu Lys Ile Lys Glu Pro Ile Lys Glu Pro Ser Glu Glu |     |     |
| 435   | 440 | 445 |
| Pro Ile Lys Glu Ile Lys Glu Glu Pro Lys Glu Glu Glu Met Thr Glu |     |     |
| 450   | 455 | 460 |
| Glu Glu Lys Ala Ala Gln Lys Ala Lys Pro Val Ala Thr Ala Pro Ile |     |     |
| 465   | 470 | 475 |
| Pro Gly Thr Pro Trp Cys Val Val Trp Thr Gly Asp Glu Arg Val Phe |     |     |
| 485   | 490 | 495 |
| Phe Tyr Asn Pro Thr Thr Arg Leu Ser Met Trp Asp Arg Pro Asp Asp |     |     |
| 500   | 505 | 510 |
| Leu Ile Gly Arg Ala Asp Val Asp Lys Ile Ile Gln Glu Pro Pro His |     |     |
| 515   | 520 | 525 |
| Lys Lys Gly Met Glu Glu Leu Lys Lys Leu Arg His Pro Thr Pro Thr |     |     |
| 530   | 535 | 540 |
| Met Leu Ser Ile Gln Lys Trp Gln Phe Ser Met Ser Ala Ile Lys Glu |     |     |
| 545   | 550 | 555 |
| Glu Gln Glu Leu Met Glu Glu Ile Asn Glu Asp Glu Pro Val Lys Ala |     |     |
| 565   | 570 | 575 |
| Lys Lys Arg Lys Arg Asp Asp Asn Lys Asp Ile Asp Ser Glu Lys Glu |     |     |
| 580   | 585 | 590 |
| Ala Ala Met Glu Ala Glu Ile Lys Ala Ala Arg Glu Arg Ala Ile Val |     |     |
| 595   | 600 | 605 |
| Pro Leu Glu Ala Arg Met Lys Gln Phe Lys Asp Met Leu Leu Glu Arg |     |     |
| 610   | 615 | 620 |
| Gly Val Ser Ala Phe Ser Thr Trp Glu Lys Glu Leu His Lys Ile Val |     |     |

625                      630                      635                      640  
 Phe Asp Pro Arg Tyr Leu Leu Leu Asn Pro Lys Glu Arg Lys Gln Val  
                             645                      650                      655  
 Phe Asp Gln Tyr Val Lys Thr Arg Ala Glu Glu Glu Arg Arg Glu Lys  
                             660                      665                      670  
 Lys Asn Lys Ile Met Gln Ala Lys Glu Asp Phe Lys Lys Met Met Glu  
                             675                      680                      685  
 Glu Ala Lys Phe Asn Pro Arg Ala Thr Phe Ser Glu Phe Ala Ala Lys  
                             690                      695                      700  
 His Ala Lys Asp Ser Arg Phe Lys Ala Ile Glu Lys Met Lys Asp Arg  
 705                      710                      715                      720  
 Glu Ala Leu Phe Asn Glu Phe Val Ala Ala Ala Arg Lys Lys Glu Lys  
                             725                      730                      735  
 Glu Asp Ser Lys Thr Arg Gly Glu Lys Ile Lys Ser Asp Phe Phe Glu  
                             740                      745                      750  
 Leu Leu Ser Asn His His Leu Asp Ser Gln Ser Arg Trp Ser Lys Val  
                             755                      760                      765  
 Lys Asp Lys Val Glu Ser Asp Pro Arg Tyr Lys Thr Val Asp Ser Ser  
                             770                      775                      780  
 Ser Met Arg Glu Asp Leu Phe Lys Gln Tyr Ile Glu Lys Ile Ala Lys  
 785                      790                      795                      800  
 Asn Leu Asp

<210> 4307

<211> 199

<212> PRT

<213> Homo sapiens

<400> 4307

Met Lys Ser Trp Leu Leu Arg Leu His Ser Glu Leu Glu His Asn Thr  
     1                      5                      10                      15  
 Thr Leu Phe Cys Glu Ser His Cys Pro Ser Leu Ala Leu Gly Ser Phe  
                             20                      25                      30  
 Cys Arg Leu Leu Leu Gly Pro Leu Thr Cys Pro His Gln Gln Thr Phe

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| His Phe Gly Ala Arg Pro Asp Phe Leu Ala Leu Gln Gly Ala Pro Gly |     |     |
| 50  | 55  | 60  |
| Ser Phe Ile Pro Cys Pro Gly Pro Gly Ile Ser Pro Phe Ser Arg Val |     |     |
| 65  | 70  | 75  |
| 80  |     |     |
| Leu Trp Val Leu Thr Glu Tyr Trp Gly Pro Arg Pro Gly Cys Trp Val |     |     |
| 85  | 90  | 95  |
| Gly Ser Ala Leu Ile Ala Pro Gly Phe Gln Leu Thr Glu His Gly Cys |     |     |
| 100   | 105 | 110 |
| Thr Cys Pro Asp Thr Trp Arg His Leu Cys Pro Cys Pro Leu Ser Pro |     |     |
| 115   | 120 | 125 |
| Gln Asp Pro Trp Ser Ser Pro Ser Leu Gly Arg Lys Pro Arg Gly Gly |     |     |
| 130   | 135 | 140 |
| Gly Pro Gly Pro Gln Gly Cys Trp Glu Asp Met Gly Pro Val Cys Leu |     |     |
| 145   | 150 | 155 |
| 160   |     |     |
| Gln Leu Gly Gly Leu Gly Gly Ala Gly Asp Thr Arg Pro Gly Ala Gly |     |     |
| 165   | 170 | 175 |
| Gly Ala Gln Leu Arg Gly Arg Arg Arg Gly Leu Asp Glu Gly Gly Gly |     |     |
| 180   | 185 | 190 |
| Val Gln Trp Glu Gly Pro Cys                                     |     |     |
| 195   |     |     |

&lt;210&gt; 4308

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4308

|   |    |    |
|---|----|----|
| Met Tyr Arg Val Met Trp Arg Glu Val Arg Arg Glu Val Gln Gln Thr |    |    |
| 1   | 5  | 10 |
| 15  |    |    |
| His Ala Val Cys Cys Gln Gly Trp Lys Lys Arg His Pro Gly Ala Leu |    |    |
| 20  | 25 | 30 |
| Thr Cys Glu Ala Ile Cys Ala Lys Pro Cys Leu Asn Gly Gly Val Cys |    |    |
| 35  | 40 | 45 |
| Val Arg Pro Asp Gln Cys Glu Cys Ala Pro Gly Trp Gly Gly Lys His |    |    |

50                      55                      60  
 Cys His Val Asp Val Asp Glu Cys Arg Thr Ser Ile Thr Leu Cys Ser  
 65                      70                      75                      80  
 His His Cys Phe Asn Thr Ala Gly Ser Phe Thr Cys Gly Cys Pro His  
                     85                      90                      95  
 Asp Leu Val Leu Gly Val Asp Gly Arg Thr Cys Met Glu Gly Ser Pro  
                     100                      105                      110  
 Glu Pro Pro Thr Ser Ala Ser Ile Leu Ser Val Ala Val Arg Glu Ala  
                     115                      120                      125  
 Glu Lys Asp Glu Arg Ala Leu Lys Gln Glu Ile His Glu Leu Arg Gly  
                     130                      135                      140  
 Arg Leu Glu Arg Leu Glu Gln Val Ser Gln Ala Cys Trp Val Gly Arg  
 145                      150                      155                      160  
 Gly Gln Thr Ser Leu Ser Ile Pro  
                     165

<210> 4309

<211> 148

<212> PRT

<213> Homo sapiens

<400> 4309

Met Ser Leu Leu Gly Pro Lys Val Leu Leu Phe Leu Ala Ala Phe Ile  
 1                      5                      10                      15  
 Ile Thr Ser Asp Trp Ile Pro Leu Gly Val Asn Ser Gln Arg Gly Asp  
                     20                      25                      30  
 Asp Val Thr Gln Ala Thr Pro Glu Thr Phe Thr Glu Asp Pro Asn Leu  
                     35                      40                      45  
 Val Asn Asp Pro Ala Thr Asp Glu Thr Glu Cys Trp Asp Glu Lys Phe  
                     50                      55                      60  
 Thr Cys Thr Arg Leu Tyr Ser Val His Arg Pro Val Lys Gln Cys Ile  
 65                      70                      75                      80  
 His Gln Leu Cys Phe Thr Ser Leu Arg Arg Met Tyr Ile Val Asn Lys  
                     85                      90                      95  
 Glu Ile Cys Ser Arg Leu Val Cys Lys Glu His Glu Ala Met Lys Asp

100 105 110  
 Glu Leu Cys Arg Gln Met Ala Gly Leu Pro Pro Arg Arg Leu Arg Arg  
 115 120 125  
 Ser Asn Tyr Phe Arg Leu Pro Pro Cys Glu Asn Val Asp Leu Gln Arg  
 130 135 140  
 Pro Asn Gly Leu  
 145

<210> 4310

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4310

Met Glu Leu Trp Gly Arg Met Leu Trp Ala Leu Leu Ser Gly Pro Gly  
 1 5 10 15  
 Arg Arg Gly Ser Thr Arg Gly Trp Ala Phe Ser Ser Trp Gln Pro Gln  
 20 25 30  
 Pro Pro Leu Ala Gly Leu Ser Ser Ala Ile Glu Leu Val Ser His Trp  
 35 40 45  
 Thr Gly Val Phe Glu Lys Arg Gly Ile Pro Glu Ala Arg Glu Ser Ser  
 50 55 60  
 Glu Tyr Ile Val Ala His Val Leu Gly Ala Lys Thr Val Lys Phe Ser  
 65 70 75 80  
 Val Val Lys Arg Thr Gly Arg Gly Arg Arg Glu Asp Leu Gly Lys Gly  
 85 90 95  
 Tyr Pro Gly Phe Leu Phe Thr Lys Ser Ala  
 100 105

<210> 4311

<211> 102

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4311

Met Leu Leu Ala Gln Glu Glu Glu Glu Cys Arg Arg Glu Leu Leu Ser  
 1 5 10 15  
 Trp Val Pro Val Pro Gln Pro Pro Arg Glu Ser Cys Leu Asp Leu Leu  
 20 25 30  
 Val Asp Gln Pro His Ser Leu Leu Ser Ile Leu Asp Ala Gln Thr Trp  
 35 40 45  
 Leu Ser Gln Ala Thr Asp His Thr Phe Leu Gln Arg Ser His Tyr His  
 50 55 60  
 His Gly Asp His Pro Ser Tyr Ala Lys Pro Arg Leu Pro Leu Pro Val  
 65 70 75 80  
 Phe Thr Val Arg His Tyr Ala Gly Thr Val Thr Tyr Gln Val Pro Gly  
 85 90 95  
 Leu Arg Asp Arg Pro Gly  
 100

&lt;210&gt; 4312

&lt;211&gt; 388

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4312

Met Asp Lys Arg Val Lys Lys Leu Pro Leu Met Ala Leu Ser Thr Thr  
 1 5 10 15  
 Met Ala Glu Ser Phe Lys Glu Leu Asp Pro Asp Ser Ser Met Gly Lys  
 20 25 30  
 Ala Leu Glu Met Ser Cys Ala Ile Gln Asn Gln Leu Ala Arg Ile Leu  
 35 40 45  
 Ala Glu Phe Glu Met Thr Leu Glu Arg Asp Val Leu Gln Pro Leu Ser  
 50 55 60  
 Arg Leu Ser Glu Glu Glu Leu Pro Ala Ile Leu Lys His Lys Lys Ser  
 65 70 75 80  
 Leu Gln Lys Leu Val Ser Asp Trp Asn Thr Leu Lys Ser Arg Leu Ser  
 85 90 95  
 Gln Ala Thr Lys Asn Ser Gly Ser Ser Gln Gly Leu Gly Gly Ser Pro



|   |     |     |
|---|-----|-----|
| 100   | 105 | 110 |
| Gly Ser His Ser His Thr Thr Met Ala Asn Lys Val Glu Thr Leu Lys |     |     |
| 115   | 120 | 125 |
| Glu Glu Glu Glu Glu Leu Lys Arg Lys Val Glu Gln Cys Arg Asp Glu |     |     |
| 130   | 135 | 140 |
| Tyr Leu Ala Asp Leu Tyr His Phe Val Thr Lys Glu Asp Ser Tyr Ala |     |     |
| 145   | 150 | 155 |
| Asn Tyr Phe Ile Arg Leu Leu Glu Ile Gln Ala Asp Tyr His Arg Arg |     |     |
| 165   | 170 | 175 |
| Ser Leu Ser Ser Leu Asp Thr Ala Leu Ala Glu Leu Arg Glu Asn His |     |     |
| 180   | 185 | 190 |
| Gly Gln Ala Asp His Ser Pro Ser Met Thr Ala Thr His Phe Pro Arg |     |     |
| 195   | 200 | 205 |
| Val Tyr Gly Val Ser Leu Ala Thr His Leu Gln Glu Leu Gly Arg Glu |     |     |
| 210   | 215 | 220 |
| Ile Ala Leu Pro Ile Glu Ala Cys Val Met Met Leu Leu Ser Glu Gly |     |     |
| 225   | 230 | 235 |
| Met Lys Glu Glu Gly Leu Phe Arg Leu Ala Ala Gly Ala Ser Val Leu |     |     |
| 245   | 250 | 255 |
| Lys Arg Leu Lys Gln Thr Met Ala Ser Asp Pro His Ser Leu Glu Glu |     |     |
| 260   | 265 | 270 |
| Phe Cys Ser Asp Pro His Ala Val Ala Gly Ala Leu Lys Ser Tyr Leu |     |     |
| 275   | 280 | 285 |
| Arg Glu Leu Pro Glu Pro Leu Met Thr Phe Asp Leu Tyr Asp Asp Trp |     |     |
| 290   | 295 | 300 |
| Met Arg Ala Ala Ser Leu Lys Glu Pro Gly Ala Arg Leu Gln Ala Leu |     |     |
| 305   | 310 | 315 |
| Gln Glu Val Cys Ser Arg Leu Pro Pro Glu Asn Leu Ser Asn Leu Arg |     |     |
| 325   | 330 | 335 |
| Tyr Leu Met Lys Phe Leu Ala Arg Leu Ala Glu Glu Gln Glu Val Asn |     |     |
| 340   | 345 | 350 |
| Lys Met Thr Pro Ser Asn Ile Ala Ile Val Leu Gly Pro Asn Leu Leu |     |     |
| 355   | 360 | 365 |
| Trp Pro Pro Glu Lys Glu Gly Thr Glu Pro Ala Arg Glu Leu Gly Ser |     |     |
| 370   | 375 | 380 |

Gln Thr Leu Cys

385

<210> 4313

<211> 140

<212> PRT

<213> Homo sapiens

<400> 4313

Met Trp Pro Phe Arg Leu Arg Cys Pro Ile Tyr Phe Lys Thr Arg Leu

1 5 10 15

Leu Tyr Ser Ser Ser Gln Asp Gly Phe Leu Ser Ser Ser Thr Asn Tyr

20 25 30

Tyr Asn His Arg Thr Tyr Pro Gly Leu Val Asn Trp Leu Phe Val Leu

35 40 45

Thr Glu Pro Glu Leu Thr Gly Glu Leu Gly Asp Asp Asp Arg Lys Gly

50 55 60

Met His Thr Gly Gly Ile Ile Arg Trp Leu Gly Arg Pro Ser Ser Gln

65 70 75 80

Leu Lys Pro Ile Phe His Ala Glu Glu Arg Arg Val Pro Pro Pro Pro

85 90 95

Glu Arg Leu Val Gly Arg Ala Ser Pro Arg Glu Gln Ala Thr Val Phe

100 105 110

Lys Arg Ile Cys Ala Pro Leu His Ala Glu Val Phe Cys Arg Ala Gly

115 120 125

Leu Cys Ala Cys His Pro Asp Cys Thr Ala Ala Gly

130 135 140

<210> 4314

<211> 113

<212> PRT

<213> Homo sapiens

<400> 4314

Met Cys Arg Leu Arg Glu Thr Ala Leu Ala Val Pro Gly Pro Pro Pro  
 1 5 10 15  
 Leu Gly Thr Asp Pro Trp Gly Ala Pro Phe Pro Pro Ser Phe Val Ser  
 20 25 30  
 Ser Phe Phe Phe Phe Phe Ser Glu Thr Glu Ser His Ser Val Ser  
 35 40 45  
 Gln Ala Gly Val Gln Trp His Asp Ile Ser Ser Leu Gln Pro Pro Pro  
 50 55 60  
 Ala Gly Leu Lys Gln Phe Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp  
 65 70 75 80  
 Tyr Arg Ser Thr Pro Pro Cys Pro Ala Asn Phe Cys Ile Phe Ser Arg  
 85 90 95  
 Asp Gly Val Ser Leu Cys Trp Pro Gly Trp Ser Pro Thr Pro Asp Leu  
 100 105 110  
 Gly

<210> 4315

<211> 379

<212> PRT

<213> Homo sapiens

<400> 4315

Met Pro Lys His Pro Asn Ser Leu Ser Gly Lys Gly Thr Gln Leu Val  
 1 5 10 15  
 Pro Ser Ser His Leu Pro Pro Pro Lys Leu Arg Ile Pro Asn Val Phe  
 20 25 30  
 Ser Ile Ser Val Ala Leu Ala Lys Arg His Leu Ser Gln Pro Gln Leu  
 35 40 45  
 Ser Ser Asp Arg Met Phe Gly Thr Asn Arg Asn Ala Ile Ser Met Ile  
 50 55 60  
 Arg Pro Leu Arg Pro Gln Glu Thr Asp Leu Asp Leu Val Asp Gly Asp  
 65 70 75 80  
 Ser Thr Glu Val Leu Glu Asn Met Asp Thr Ser Cys Asp Asp Gly Leu  
 85 90 95

Phe Ser Tyr Asp Ser Leu Asp Ser Pro Asn Ser Asp Asp Gln Glu His  
 100 105 110  
 Cys Asp Ser Ala Lys Lys Val Ala Tyr Ser Lys Pro Pro Thr Pro Pro  
 115 120 125  
 Leu His Arg Phe Pro Ser Trp Glu Ser Arg Ile Tyr Ala Val Ala Lys  
 130 135 140  
 Ser Gly Ile Arg Met Ser Glu Ala Phe Asn Met Glu Ser Val Asn Lys  
 145 150 155 160  
 Asn Ser Ala Ala Thr Leu Ser Tyr Thr Thr Ser Gly Leu Tyr Thr Ser  
 165 170 175  
 Leu Ile Tyr Lys Asn Met Thr Thr Pro Val Tyr Thr Thr Leu Lys Gly  
 180 185 190  
 Lys Ala Thr Gln Ile Ser Ser Ser Pro Phe Leu Asp Asp Ser Ser Gly  
 195 200 205  
 Ser Glu Glu Glu Asp Ser Ser Arg Ser Ser Ser Arg Thr Ser Glu Ser  
 210 215 220  
 Asp Ser Arg Ser Arg Ser Gly Pro Gly Ser Pro Arg Ala Met Lys Arg  
 225 230 235 240  
 Gly Val Ser Leu Ser Ser Val Ala Ser Glu Ser Asp Tyr Ala Ile Pro  
 245 250 255  
 Pro Asp Ala Tyr Ser Thr Asp Thr Glu Tyr Ser Gln Pro Glu Gln Lys  
 260 265 270  
 Leu Pro Lys Thr Cys Ser Ser Ser Ser Asp Asn Gly Lys Asn Glu Pro  
 275 280 285  
 Leu Glu Lys Ser Gly Tyr Leu Leu Lys Met Ser Gly Lys Val Lys Ser  
 290 295 300  
 Trp Lys Arg Arg Trp Phe Val Leu Lys Gly Gly Glu Leu Leu Tyr Tyr  
 305 310 315 320  
 Lys Ser Pro Ser Asp Val Ile Arg Lys Pro Gln Gly His Ile Glu Leu  
 325 330 335  
 Ser Ala Ser Cys Ser Ile Leu Arg Gly Asp Asn Lys Gln Thr Val Gln  
 340 345 350  
 Val Leu Asn Phe Phe Phe Phe Phe Phe Phe Leu Tyr His Ala Arg Leu  
 355 360 365  
 Asn Ser Gln Leu Ser Asn Leu Met Glu Arg Arg  
 370 375

&lt;210&gt; 4316

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4316

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Met Val Phe Pro Arg Leu Phe Thr Cys Pro Thr Leu Glu Thr Thr Asn
  1             5             10             15
Phe Lys Val Gly Lys Trp His Ser Pro Pro Ala Leu Met Gly Pro Trp
          20             25             30
Glu Gly Pro Leu Ser Ala Arg Ala Cys Cys Gly Ser Gln Ser Ser Glu
          35             40             45
Pro Ala Ala Leu Arg Ser Leu Ser Ala Arg Ala Cys His Arg Pro Tyr
          50             55             60
Ser Ser Glu Pro Ala Ala Leu Arg Leu Leu Asn Lys Thr Leu Leu Arg
  65             70             75             80
Ser Cys Cys Ala Ala Gln Gly Thr His Pro Gln Ala Val Leu Val Leu
          85             90             95
Val Gly Leu Pro Leu Ser His Gly Glu Thr His Arg Pro Thr Ser Val
          100            105            110

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&lt;210&gt; 4317

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4317

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Met Ala Ser Met Gly Leu Gln Val Met Gly Ile Ala Leu Ala Val Leu
  1             5             10             15
Gly Trp Leu Ala Val Met Leu Cys Cys Ala Leu Pro Met Trp Arg Val
          20             25             30
Thr Ala Phe Ile Gly Ser Asn Ile Val Thr Ser Gln Thr Ile Trp Glu
          35             40             45

```

Gly Leu Trp Met Asn Cys Val Val Gln Ser Thr Gly Gln Met Gln Cys  
 50 55 60  
 Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln Asp Leu Gln Ala Ala  
 65 70 75 80  
 Arg Ala Leu Val Ile Ile Ser Ile Ile Val Ala Ala Leu Gly Val Leu  
 85 90 95  
 Leu Ser Val Val Gly Gly Lys Cys Thr Asn Cys Leu Glu Asp Glu Ser  
 100 105 110  
 Ala Lys Ala Lys Thr Met Ile Val Ala Gly Val Val Phe Leu Leu Ala  
 115 120 125  
 Gly Leu Met Val Ile Val Pro Val Ser Trp Thr Ala His Asn Ile Ile  
 130 135 140  
 Gln Asp Phe Tyr Asn Pro Leu Val Ala Ser Gly Gln Lys Arg Glu Met  
 145 150 155 160  
 Gly Ala Ser Leu Tyr Val Gly Trp Ala Ala Ser Gly Leu Leu Leu Leu  
 165 170 175  
 Gly Gly Gly Leu Leu Cys Cys Asn Ser Pro Pro Arg Thr Asp Lys Pro  
 180 185 190  
 Tyr Ser Ala Lys Tyr Ser Ala Ala Arg Ser Ala Ala Ala Ser Asn Tyr  
 195 200 205  
 Val

<210> 4318

<211> 559

<212> PRT

<213> Homo sapiens

<400> 4318

Met Pro Ser Gly Lys Trp Glu Ala Trp Gly Tyr Gly Lys Asp Gly Thr  
 1 5 10 15  
 Gly Ser Arg Lys Ala Gln Glu Lys Asn Ser Gly Ala Asn Ser Ser Ser  
 20 25 30  
 Leu Ser Thr Ala Ser Ala Pro Gly Ala Ala Pro Leu Thr Ile Ser Ser  
 35 40 45

Pro Leu His Val Pro Ser Ser Leu Pro Gly Pro Ala Ser Ser Pro Met  
 50 55 60  
 Pro Ile Pro Asn Ser Ser Pro Leu Ala Ser Pro Val Ser Ser Thr Val  
 65 70 75 80  
 Ser Val Pro Leu Ser Ser Ser Leu Pro Ile Ser Val Pro Thr Thr Leu  
 85 90 95  
 Pro Ala Pro Ala Ser Ala Pro Leu Thr Ile Pro Ile Ser Ala Pro Leu  
 100 105 110  
 Thr Val Ser Ala Ser Gly Pro Ala Leu Leu Thr Ser Val Thr Pro Pro  
 115 120 125  
 Leu Ala Pro Val Val Pro Ala Ala Pro Gly Pro Pro Ser Leu Ala Pro  
 130 135 140  
 Ser Gly Ala Ser Pro Ser Ala Ser Ala Leu Thr Leu Gly Leu Ala Thr  
 145 150 155 160  
 Ala Pro Ser Leu Ser Ser Ser Gln Thr Pro Gly His Pro Leu Leu Leu  
 165 170 175  
 Ala Pro Thr Ser Ser His Val Pro Gly Leu Asn Ser Thr Val Ala Pro  
 180 185 190  
 Ala Cys Ser Pro Val Leu Val Pro Ala Ser Ala Leu Ala Ser Pro Phe  
 195 200 205  
 Pro Ser Ala Pro Asn Pro Ala Pro Ala Gln Ala Ser Leu Leu Ala Pro  
 210 215 220  
 Ala Ser Ser Ala Ser Gln Ala Leu Ala Thr Pro Leu Ala Pro Met Ala  
 225 230 235 240  
 Ala Pro Gln Thr Ala Ile Leu Ala Pro Ser Pro Ala Pro Pro Leu Ala  
 245 250 255  
 Pro Leu Pro Val Leu Ala Pro Ser Pro Gly Ala Ala Pro Val Leu Ala  
 260 265 270  
 Ser Ser Gln Thr Pro Val Pro Val Met Ala Pro Ser Ser Thr Pro Gly  
 275 280 285  
 Thr Ser Leu Ala Ser Ala Ser Pro Val Pro Ala Pro Thr Pro Val Leu  
 290 295 300  
 Ala Pro Ser Ser Thr Gln Thr Met Leu Pro Ala Pro Val Pro Ser Pro  
 305 310 315 320  
 Leu Pro Ser Pro Ala Ser Thr Gln Thr Leu Ala Leu Ala Pro Ala Leu  
 325 330 335

Ala Pro Thr Leu Gly Gly Ser Ser Pro Ser Gln Thr Leu Ser Leu Gly  
                   340                                  345                                  350  
 Thr Gly Asn Pro Gln Gly Pro Phe Pro Thr Gln Thr Leu Ser Leu Thr  
                   355                                  360                                  365  
 Pro Ala Ser Ser Leu Val Pro Thr Pro Ala Gln Thr Leu Ser Leu Ala  
                   370                                  375                                  380  
 Pro Gly Pro Pro Leu Gly Pro Thr Gln Thr Leu Ser Leu Ala Pro Ala  
 385                                  390                                  395                                  400  
 Pro Pro Leu Ala Pro Ala Ser Pro Val Gly Pro Ala Pro Ala His Thr  
                                   405                                  410                                  415  
 Leu Thr Leu Ala Pro Ala Ser Ser Ser Ala Ser Leu Leu Ala Pro Ala  
                                   420                                  425                                  430  
 Ser Val Gln Thr Leu Thr Leu Ser Pro Ala Pro Val Pro Thr Leu Gly  
                   435                                  440                                  445  
 Pro Ala Ala Ala Gln Thr Leu Ala Leu Ala Pro Ala Ser Thr Gln Ser  
                   450                                  455                                  460  
 Pro Ala Ser Gln Ala Ser Ser Leu Val Val Ser Ala Ser Gly Ala Ala  
 465                                  470                                  475                                  480  
 Pro Leu Pro Val Thr Met Val Ser Arg Leu Pro Val Ser Lys Tyr Glu  
                                   485                                  490                                  495  
 Pro Asp Thr Leu Thr Leu Arg Ser Gly Pro Pro Ser Pro Pro Ser Thr  
                   500                                  505                                  510  
 Ala Thr Ser Phe Gly Gly Pro Arg Pro Arg Arg Gln Pro Pro Pro Pro  
                   515                                  520                                  525  
 Pro Arg Ser Pro Phe Tyr Leu Val Ser Phe Thr Ser Ser Arg Gly Asn  
                   530                                  535                                  540  
 Arg Lys Leu Ser Phe Phe Gly Val Leu Val Gly Trp Met Glu Gln  
 545                                  550                                  555

<210> 4319

<211> 962

<212> PRT

<213> Homo sapiens

<400> 4319



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Thr | Asp | Leu | Tyr | Asp | Glu | Phe | Gly | Asn | Tyr | Ile | Gly | Pro | Glu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Leu | Asp | Ser | Asp | Glu | Asp | Asp | Asp | Glu | Leu | Gly | Arg | Glu | Thr | Lys | Asp |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Asp | Glu | Met | Asp | Asp | Asp | Asp | Asp | Asp | Asp | Val | Gly | Asp | His |     |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asp | Asp | Asp | His | Pro | Gly | Met | Glu | Val | Val | Leu | His | Glu | Val | Tyr | Gly |
|     | 50  |     |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |
| Pro | Glu | Val | Glu | Thr | Ile | Val | Gln | Glu | Glu | Asp | Thr | Gln | Pro | Leu | Thr |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |     |
| Glu | Pro | Ile | Ile | Lys | Pro | Val | Lys | Thr | Lys | Lys | Phe | Thr | Leu | Met | Glu |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Gln | Thr | Leu | Pro | Val | Thr | Val | Tyr | Glu | Met | Asp | Phe | Leu | Ala | Asp | Leu |
|     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Met | Asp | Asn | Ser | Glu | Leu | Ile | Arg | Asn | Val | Thr | Leu | Cys | Gly | His | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| His | His | Gly | Lys | Thr | Cys | Phe | Val | Asp | Cys | Leu | Ile | Glu | Gln | Thr | His |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Glu | Ile | Arg | Lys | Arg | Tyr | Asp | Gln | Asp | Leu | Cys | Tyr | Thr | Asp | Ile |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     | 160 |     |
| Leu | Phe | Thr | Glu | Gln | Glu | Arg | Gly | Val | Gly | Ile | Lys | Ser | Thr | Pro | Val |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Thr | Val | Val | Leu | Pro | Asp | Thr | Lys | Gly | Lys | Ser | Tyr | Leu | Phe | Asn | Ile |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Met | Asp | Thr | Pro | Gly | His | Val | Asn | Phe | Ser | Asp | Glu | Val | Thr | Ala | Gly |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |
| Leu | Arg | Ile | Ser | Asp | Gly | Val | Val | Leu | Phe | Ile | Asp | Ala | Ala | Glu | Gly |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Val | Met | Leu | Asn | Thr | Glu | Arg | Leu | Ile | Lys | His | Ala | Val | Gln | Glu | Arg |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Leu | Ala | Val | Thr | Val | Cys | Ile | Asn | Lys | Ile | Asp | Arg | Leu | Ile | Leu | Glu |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Leu | Lys | Leu | Pro | Pro | Thr | Asp | Ala | Tyr | Tyr | Lys | Leu | Arg | His | Ile | Val |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Asp | Glu | Val | Asn | Gly | Leu | Ile | Ser | Met | Tyr | Ser | Thr | Asp | Glu | Asn | Leu |
|     |     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |

Ile Leu Ser Pro Leu Leu Gly Asn Val Cys Phe Ser Ser Ser Gln Tyr  
 290 295 300  
 Ser Ile Cys Phe Thr Leu Gly Ser Phe Ala Lys Ile Tyr Ala Asp Thr  
 305 310 315 320  
 Phe Gly Asp Ile Asn Tyr Gln Glu Phe Ala Lys Arg Leu Trp Gly Asp  
 325 330 335  
 Ile Tyr Phe Asn Pro Lys Thr Arg Lys Phe Thr Lys Lys Ala Pro Thr  
 340 345 350  
 Ser Ser Ser Gln Arg Ser Phe Val Glu Phe Ile Leu Glu Pro Leu Tyr  
 355 360 365  
 Lys Ile Leu Ala Gln Val Val Gly Asp Val Asp Thr Ser Leu Pro Arg  
 370 375 380  
 Thr Leu Asp Glu Leu Gly Ile His Leu Thr Lys Glu Glu Leu Lys Leu  
 385 390 395 400  
 Asn Ile Arg Pro Leu Leu Arg Leu Val Cys Lys Lys Phe Phe Gly Glu  
 405 410 415  
 Phe Thr Gly Phe Val Asp Met Cys Val Gln His Ile Pro Ser Pro Lys  
 420 425 430  
 Val Gly Ala Lys Pro Lys Ile Glu His Thr Tyr Thr Gly Gly Val Asp  
 435 440 445  
 Ser Asp Leu Gly Glu Ala Met Ser Asp Cys Asp Pro Asp Gly Pro Leu  
 450 455 460  
 Met Cys His Thr Thr Lys Met Tyr Ser Thr Asp Asp Gly Val Gln Phe  
 465 470 475 480  
 His Ala Phe Gly Arg Val Leu Ser Gly Thr Ile His Ala Gly Gln Pro  
 485 490 495  
 Val Lys Val Leu Gly Glu Asn Tyr Thr Leu Glu Asp Glu Glu Asp Ser  
 500 505 510  
 Gln Ile Cys Thr Val Gly Arg Leu Trp Ile Ser Val Ala Arg Tyr His  
 515 520 525  
 Ile Glu Val Asn Arg Val Pro Ala Gly Asn Trp Val Leu Ile Glu Gly  
 530 535 540  
 Val Asp Gln Pro Ile Val Lys Thr Ala Thr Ile Thr Glu Pro Arg Gly  
 545 550 555 560  
 Asn Glu Glu Ala Gln Ile Phe Arg Pro Leu Lys Phe Asn Thr Thr Ser  
 565 570 575

Val Ile Lys Ile Ala Val Glu Pro Val Asn Pro Ser Glu Leu Pro Lys  
 580 585 590  
 Met Leu Asp Gly Leu Arg Lys Val Asn Lys Ser Tyr Pro Ser Leu Thr  
 595 600 605  
 Thr Lys Val Glu Glu Ser Gly Glu His Val Ile Leu Gly Thr Gly Glu  
 610 615 620  
 Leu Tyr Leu Asp Cys Val Met His Asp Leu Arg Lys Met Tyr Ser Glu  
 625 630 635 640  
 Ile Asp Ile Lys Val Ala Asp Pro Val Val Thr Phe Cys Glu Thr Val  
 645 650 655  
 Val Glu Thr Ser Ser Leu Lys Cys Phe Ala Glu Thr Pro Asn Lys Lys  
 660 665 670  
 Asn Lys Ile Thr Met Ile Ala Glu Pro Leu Glu Lys Gly Leu Ala Glu  
 675 680 685  
 Asp Ile Glu Asn Glu Val Val Gln Ile Thr Trp Asn Arg Lys Lys Leu  
 690 695 700  
 Gly Glu Phe Phe Gln Thr Lys Tyr Asp Trp Asp Leu Leu Ala Ala Arg  
 705 710 715 720  
 Ser Ile Trp Ala Phe Gly Pro Asp Ala Thr Gly Pro Asn Ile Leu Val  
 725 730 735  
 Asp Asp Thr Leu Pro Ser Glu Val Asp Lys Ala Leu Leu Gly Ser Val  
 740 745 750  
 Lys Asp Ser Ile Val Gln Gly Phe Gln Trp Gly Thr Arg Glu Gly Pro  
 755 760 765  
 Leu Cys Asp Glu Leu Ile Arg Asn Val Lys Phe Lys Ile Leu Asp Ala  
 770 775 780  
 Val Val Ala Gln Glu Pro Leu His Arg Gly Gly Gly Gln Ile Ile Pro  
 785 790 795 800  
 Thr Ala Arg Arg Val Val Tyr Ser Ala Phe Leu Met Ala Thr Pro Arg  
 805 810 815  
 Leu Met Glu Pro Tyr Tyr Phe Val Glu Val Gln Ala Pro Ala Asp Cys  
 820 825 830  
 Val Ser Ala Val Tyr Thr Val Leu Ala Arg Arg Arg Gly His Val Thr  
 835 840 845  
 Gln Asp Ala Pro Ile Pro Gly Ser Pro Leu Tyr Thr Ile Lys Ala Phe  
 850 855 860

Ile Pro Ala Ile Asp Ser Phe Gly Phe Glu Thr Asp Leu Arg Thr His  
 865                      870                      875                      880  
 Thr Gln Gly Gln Ala Phe Ser Leu Ser Val Phe His His Trp Gln Ile  
                     885                      890                      895  
 Val Pro Gly Asp Pro Leu Asp Lys Ser Ile Val Ile Arg Pro Leu Glu  
                     900                      905                      910  
 Pro Gln Pro Ala Pro His Leu Ala Arg Glu Phe Met Ile Lys Thr Arg  
                     915                      920                      925  
 Arg Arg Lys Gly Leu Ser Glu Asp Val Ser Ile Ser Lys Phe Phe Asp  
                     930                      935                      940  
 Asp Pro Met Leu Leu Glu Leu Ala Lys Gln Asp Val Val Leu Asn Tyr  
 945                      950                      955                      960  
 Pro Met

<210> 4320

<211> 281

<212> PRT

<213> Homo sapiens

<400> 4320

Met Arg Phe Val Val Ala Leu Val Leu Leu Asn Val Ala Ala Ala Gly  
   1                      5                      10                      15  
 Ala Val Pro Leu Leu Ala Thr Glu Ser Val Lys Gln Glu Glu Ala Gly  
                     20                      25                      30  
 Val Arg Pro Ser Ala Gly Asn Val Ser Thr His Pro Ser Leu Ser Gln  
                     35                      40                      45  
 Arg Pro Gly Gly Ser Thr Lys Ser His Pro Glu Pro Gln Thr Pro Lys  
                     50                      55                      60  
 Asp Ser Pro Ser Lys Ser Gly Ser Glu Ala Gln Thr Thr Lys Asp Val  
   65                      70                      75                      80  
 Pro Asn Lys Ser Gly Ala Asp Gly Gln Thr Pro Lys Asp Gly Ser Ser  
                     85                      90                      95  
 Lys Ser Gly Ala Glu Asp Gln Thr Pro Lys Asp Val Pro Asn Lys Ser  
                     100                      105                      110

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gly | Ala | Glu | Lys | Gln | Thr | Pro | Lys | Asp | Gly | Ser | Asn | Lys | Ser | Gly | Ala |  |
| 115 |     |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |     |  |
| Glu | Glu | Gln | Gly | Pro | Ile | Asp | Gly | Pro | Ser | Lys | Ser | Gly | Ala | Glu | Glu |  |
| 130 |     |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |  |
| Gln | Thr | Ser | Lys | Asp | Ser | Pro | Asn | Lys | Glu | Glu | Val | Lys | Ser | Ser | Glu |  |
| 145 |     |     |     |     |     | 150 |     |     |     |     |     | 155 |     |     | 160 |  |
| Pro | Thr | Glu | Asp | Val | Glu | Pro | Lys | Glu | Ala | Glu | Asp | Asp | Asp | Thr | Gly |  |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     |     | 175 |  |
| Pro | Glu | Glu | Gly | Ser | Pro | Pro | Lys | Glu | Glu | Lys | Glu | Lys | Met | Ser | Gly |  |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     |     | 190 |  |
| Ser | Ala | Ser | Ser | Glu | Asn | Arg | Glu | Gly | Thr | Leu | Ser | Asp | Ser | Thr | Gly |  |
| 195 |     |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |     |  |
| Ser | Glu | Lys | Asp | Asp | Leu | Tyr | Pro | Asn | Gly | Ser | Gly | Asn | Gly | Ser | Ala |  |
| 210 |     |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |     |  |
| Glu | Ser | Ser | His | Phe | Phe | Ala | Tyr | Leu | Val | Thr | Ala | Ala | Ile | Leu | Val |  |
| 225 |     |     |     |     |     | 230 |     |     |     |     |     | 235 |     |     | 240 |  |
| Ala | Val | Leu | Tyr | Ile | Ala | His | His | Asn | Lys | Arg | Lys | Ile | Ile | Ala | Phe |  |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     |     | 255 |  |
| Val | Leu | Glu | Gly | Lys | Arg | Ser | Lys | Val | Thr | Arg | Arg | Pro | Lys | Ala | Ser |  |
| 260 |     |     |     |     |     | 265 |     |     |     |     |     | 270 |     |     |     |  |
| Asp | Tyr | Gln | Arg | Leu | Asp | Gln | Lys | Ser |     |     |     |     |     |     |     |  |
| 275 |     |     |     |     |     | 280 |     |     |     |     |     |     |     |     |     |  |

<210> 4321

&lt;211&gt; 647

&lt;212&gt; PRT

<213> Homo sapiens

&lt;400&gt; 4321

Met Ala Ala Ile Leu Gly Asp Thr Ile Met Val Ala Lys Gly Leu Val  
1 5 10 15  
Lys Leu Thr Gln Ala Ala Val Glu Thr His Leu Gln His Leu Gly Ile  
20 25 30  
Gly Gly Glu Leu Ile Met Ala Ala Arg Ala Leu Gln Ser Thr Ala Val  
35 40 45

Glu Gln Ile Gly Met Phe Leu Gly Lys Val Gln Gly Gln Asp Lys His  
 50 55 60  
 Glu Glu Tyr Phe Ala Glu Asn Phe Gly Gly Pro Glu Gly Glu Phe His  
 65 70 75 80  
 Phe Ser Val Pro His Ala Ala Gly Ala Ser Thr Asp Phe Ser Ser Ala  
 85 90 95  
 Ser Ala Pro Asp Gln Ser Ala Pro Pro Ser Leu Gly His Ala His Ser  
 100 105 110  
 Glu Gly Pro Ala Pro Ala Tyr Val Ala Ser Gly Pro Phe Arg Glu Ala  
 115 120 125  
 Gly Phe Pro Gly Gln Ala Ser Ser Pro Leu Gly Arg Ala Asn Gly Arg  
 130 135 140  
 Leu Phe Ala Asp Pro Arg Asp Ser Phe Ser Ala Met Gly Phe Gln Arg  
 145 150 155 160  
 Arg Phe Phe His Gln Asp Gln Ser Pro Val Gly Gly Leu Thr Ala Glu  
 165 170 175  
 Asp Ile Glu Lys Ala Arg Gln Ala Lys Ala Arg Pro Glu Asn Lys Gln  
 180 185 190  
 His Lys Gln Thr Leu Ser Glu His Ala Arg Glu Arg Lys Val Pro Val  
 195 200 205  
 Thr Arg Ile Gly Arg Leu Ala Asn Phe Gly Gly Leu Ala Val Gly Leu  
 210 215 220  
 Gly Phe Gly Ala Leu Ala Glu Val Ala Lys Lys Ser Leu Arg Ser Glu  
 225 230 235 240  
 Asp Pro Ser Gly Lys Lys Ala Val Leu Gly Ser Ser Pro Phe Leu Ser  
 245 250 255  
 Glu Ala Asn Ala Glu Arg Ile Val Arg Thr Leu Cys Lys Val Arg Gly  
 260 265 270  
 Ala Ala Leu Lys Leu Gly Gln Met Leu Ser Ile Gln Asp Asp Ala Phe  
 275 280 285  
 Ile Asn Pro His Leu Ala Lys Ile Phe Glu Arg Val Arg Gln Ser Ala  
 290 295 300  
 Asp Phe Met Pro Leu Lys Gln Met Met Lys Thr Leu Asn Asn Asp Leu  
 305 310 315 320  
 Gly Pro Asn Trp Arg Asp Lys Leu Glu Tyr Phe Glu Glu Arg Pro Phe  
 325 330 335

Ala Ala Ala Ser Ile Gly Gln Val His Leu Ala Arg Met Lys Gly Gly  
 340 345 350  
 Arg Glu Val Ala Met Lys Ile Gln Tyr Pro Gly Val Ala Gln Ser Ile  
 355 360 365  
 Asn Ser Asp Val Asn Asn Leu Met Ala Val Leu Asn Met Ser Asn Met  
 370 375 380  
 Leu Pro Glu Gly Leu Phe Pro Glu His Leu Ile Asp Val Leu Arg Arg  
 385 390 395 400  
 Glu Leu Ala Leu Glu Cys Asp Tyr Gln Arg Glu Ala Ala Cys Ala Arg  
 405 410 415  
 Lys Phe Arg Asp Leu Leu Lys Gly His Pro Phe Phe Tyr Val Pro Glu  
 420 425 430  
 Ile Val Asp Glu Leu Cys Ser Pro His Val Leu Thr Thr Glu Leu Val  
 435 440 445  
 Ser Gly Phe Pro Leu Asp Gln Ala Glu Gly Leu Ser Gln Glu Ile Arg  
 450 455 460  
 Asn Glu Ile Cys Tyr Asn Ile Leu Val Leu Cys Leu Arg Glu Leu Phe  
 465 470 475 480  
 Glu Phe His Phe Met Gln Thr Asp Pro Asn Trp Ser Asn Phe Phe Tyr  
 485 490 495  
 Asp Pro Gln Gln His Lys Val Ala Leu Leu Asp Phe Gly Ala Thr Arg  
 500 505 510  
 Glu Tyr Asp Arg Ser Phe Thr Asp Leu Tyr Ile Gln Ile Ile Arg Ala  
 515 520 525  
 Ala Ala Asp Arg Asp Arg Glu Thr Val Arg Ala Lys Ser Ile Glu Met  
 530 535 540  
 Lys Phe Leu Thr Gly Tyr Glu Val Lys Val Met Glu Asp Ala His Leu  
 545 550 555 560  
 Asp Ala Ile Leu Ile Leu Gly Glu Ala Phe Ala Ser Asp Glu Pro Phe  
 565 570 575  
 Asp Phe Gly Thr Gln Ser Thr Thr Glu Lys Ile His Asn Leu Ile Pro  
 580 585 590  
 Val Met Leu Arg His Arg Leu Val Pro Pro Pro Glu Glu Thr Tyr Ser  
 595 600 605  
 Leu His Arg Lys Met Gly Gly Ser Phe Leu Ile Cys Ser Lys Leu Lys

610                      615                      620  
 Ala Arg Phe Pro Cys Lys Ala Met Phe Glu Glu Ala Tyr Ser Asn Tyr  
 625                      630                      635                      640  
 Cys Lys Arg Gln Ala Gln Gln  
                          645

<210> 4322

<211> 419

<212> PRT

<213> Homo sapiens

<400> 4322

Met Ser Arg Gly Thr Arg Glu Ser Ala Cys Cys Met Leu Thr Ser Trp  
   1                      5                      10                      15  
 Ala Ser Arg Gly Trp Pro Ala Ser Val Pro Leu Arg Ser Trp Cys Ser  
                          20                      25                      30  
 Cys Ser Met Ser Ser Leu Ala Ser Ser Thr Arg Leu Pro Arg Lys Leu  
                          35                      40                      45  
 Arg Ala Ala Thr Gly Val Asp Ile Asn Met Arg Val Gly Val His Ser  
                          50                      55                      60  
 Gly Ser Val Leu Cys Gly Val Ile Gly Leu Gln Lys Trp Gln Tyr Asp  
   65                      70                      75                      80  
 Val Trp Ser His Asp Val Thr Leu Ala Asn His Met Glu Ala Gly Gly  
                          85                      90                      95  
 Val Pro Gly Arg Val His Ile Thr Gly Ala Thr Leu Ala Leu Leu Ala  
                          100                      105                      110  
 Gly Ala Tyr Ala Val Glu Asp Ala Gly Met Glu His Arg Asp Pro Tyr  
                          115                      120                      125  
 Leu Arg Glu Leu Gly Glu Pro Thr Tyr Leu Val Ile Asp Pro Arg Ala  
                          130                      135                      140  
 Glu Glu Glu Asp Glu Lys Gly Thr Ala Gly Gly Leu Leu Ser Ser Leu  
   145                      150                      155                      160  
 Glu Gly Leu Lys Met Arg Pro Ser Leu Leu Met Thr Arg Tyr Leu Glu  
                          165                      170                      175  
 Ser Trp Gly Ala Ala Lys Pro Phe Ala His Leu Ser His Gly Asp Ser



|   |                                 |                 |
|---|---------------------------------|-----------------|
| 180   | 185                             | 190             |
| Pro Val Ser Thr Ser Thr   | Pro Leu Pro Glu Lys Thr         | Leu Ala Ser Phe |
| 195   | 200                             | 205             |
| Ser Thr Gln Trp Ser Leu Asp Arg                                 | Ser Arg Thr Pro Arg Gly Leu Asp |                 |
| 210   | 215                             | 220             |
| Asp Glu Leu Asp Thr Gly Asp Ala Lys Phe Phe Gln Val Ile Glu Gln |                                 |                 |
| 225   | 230                             | 235             |
| Leu Asn Ser Gln Lys Gln Trp Lys Gln Ser Lys Asp Phe Asn Pro Leu |                                 |                 |
| 245   | 250                             | 255             |
| Thr Leu Tyr Phe Arg Glu Lys Glu Met Glu Lys Glu Tyr Arg Leu Ser |                                 |                 |
| 260   | 265                             | 270             |
| Ala Ile Pro Ala Phe Lys Tyr Tyr Glu Ala Cys Thr Phe Leu Val Phe |                                 |                 |
| 275   | 280                             | 285             |
| Leu Ser Asn Phe Ile Ile Gln Met Leu Val Thr Asn Arg Pro Pro Ala |                                 |                 |
| 290   | 295                             | 300             |
| Leu Ala Ile Thr Tyr Ser Ile Thr Phe Leu Leu Phe Leu Leu Ile Leu |                                 |                 |
| 305   | 310                             | 315             |
| Phe Val Cys Phe Ser Glu Asp Leu Met Arg Cys Val Leu Lys Gly Pro |                                 |                 |
| 325   | 330                             | 335             |
| Lys Met Leu His Trp Leu Pro Ala Leu Ser Gly Leu Val Ala Thr Arg |                                 |                 |
| 340   | 345                             | 350             |
| Pro Gly Leu Arg Ile Ala Leu Gly Thr Ala Thr Ile Leu Leu Val Phe |                                 |                 |
| 355   | 360                             | 365             |
| Ala Met Ala Ile Thr Ser Leu Phe Phe Phe Pro Thr Ser Ser Asp Cys |                                 |                 |
| 370   | 375                             | 380             |
| Pro Phe Gln Ala Pro Asn Val Ser Ser Met Ile Ser Asn Leu Ser Trp |                                 |                 |
| 385   | 390                             | 395             |
| Glu Leu Pro Gly Ser Leu Pro Leu Ile Ser Val Pro Val Ser Val Pro |                                 |                 |
| 405   | 410                             | 415             |
| Thr Cys Pro   |                                 |                 |

&lt;210&gt; 4323

&lt;211&gt; 101

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4323

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Met Ala His Val Ala Glu Lys Asp Gly Leu Asp Trp Ala Ser Gly Cys
 1             5             10             15
Ile Pro Gly Leu Gln Thr Gly Ile Cys Leu Phe Gly Ser Gln Leu Cys
          20             25             30
Phe His Leu Ser Trp Leu Tyr Ser Trp Ala Ser Gln Cys Gly Pro Thr
          35             40             45
Ala Pro Val Ile Asp Lys Lys Ser Ser Pro Leu Leu Thr Glu Leu Leu
          50             55             60
Asp Leu Val Leu Ile Gly Pro Asp Glu Glu Gly Ile Gln Pro Gln Val
 65             70             75             80
Ile Ile Val Ala Arg Lys Met Glu Tyr Thr Lys Trp Thr Gly Leu Ala
          85             90             95
Cys Thr His Arg Asp
          100

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<210> 4324

<211> 224

<212> PRT

<213> Homo sapiens

<400> 4324

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Met Val Cys Leu Val Leu Leu Asn His Pro Lys Glu Leu Asn Met Ala
 1             5             10             15
Lys Gln Met Val Lys Ala Ser Arg Leu Phe Tyr Phe Gly Ser Ala Arg
          20             25             30
Ser Pro Leu Thr Cys Asp Leu Cys Cys Pro Ser Arg Trp Ser Gln Ala
          35             40             45
Ile Gln Pro Cys Pro Leu Pro Leu Cys Pro Asp Ala Ser Gly Ala Arg
          50             55             60
Leu Phe Arg Leu Ala Leu Thr Ser Gly Arg Gln Ser Thr Leu Arg Asp
 65             70             75             80
Val Ala Asn Thr Thr Pro Pro Val Leu Ser Val Gly Arg Ala Glu Ala

```

|   |     |     |     |
|---|-----|-----|-----|
|   | 85  | 90  | 95  |
| Ala Trp Glu Ala Arg Gly Asp Arg Lys Arg Ala Leu Ser Ser Ser Glu |     |     |     |
| 100   | 105 | 110 |     |
| Lys Arg Ile Cys His Gln Ile Glu Phe Arg Pro Leu Ser Leu Phe Gly |     |     |     |
| 115   | 120 | 125 |     |
| Arg Met Val Gln Ile Gln Ile Lys Val Val Thr Gln Pro Glu Met Ser |     |     |     |
| 130   | 135 | 140 |     |
| Gly Lys Ala Phe Cys Arg Glu Asn Val Pro Pro Pro Ala Ile Cys Ser |     |     |     |
| 145   | 150 | 155 | 160 |
| Gln Val Cys Ala Thr Arg Gln Pro Ser Arg Asn Ile Val Trp Ile Leu |     |     |     |
| 165   | 170 | 175 |     |
| Lys Met Cys Leu Phe Leu Phe Leu Asn His Phe Ile Thr Tyr Phe Leu |     |     |     |
| 180   | 185 | 190 |     |
| Ile Tyr Phe Val Met Ser Cys Phe Glu Val Leu Leu Leu Ser Leu Leu |     |     |     |
| 195   | 200 | 205 |     |
| Ser Phe Pro Leu Phe Leu Ser Leu Ile Tyr Phe Val Lys Val Val His |     |     |     |
| 210   | 215 | 220 |     |

&lt;210&gt; 4325

&lt;211&gt; 1192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4325

|   |    |    |    |
|---|----|----|----|
| Met Leu Asp Gly Ala Arg Leu Glu Gly Asp Leu Ser Leu Ala His Glu |    |    |    |
| 1   | 5  | 10 | 15 |
| Asp Val Ala Gly Lys Asp Ser Lys Phe Gln Gly Pro Lys Leu Ser Thr |    |    |    |
| 20  | 25 | 30 |    |
| Ser Gly Phe Glu Trp Ser Ser Lys Lys Val Ser Met Ser Ser Ser Glu |    |    |    |
| 35  | 40 | 45 |    |
| Ile Glu Gly Asn Val Thr Phe His Glu Lys Thr Ser Ala Phe Pro Ile |    |    |    |
| 50  | 55 | 60 |    |
| Val Glu Ser Val Val His Glu Gly Asp Leu His Asp Pro Ser Arg Asp |    |    |    |
| 65  | 70 | 75 | 80 |
| Gly Asn Leu Gly Leu Ala Val Gly Glu Val Gly Met Asp Ser Lys Phe |    |    |    |

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 85  |     | 90  |     | 95  |
| Lys Lys Leu His Phe Lys Val Pro Lys Val Ser Phe Ser Ser Thr Lys |     |     |     |     |     |
|   | 100 |     | 105 |     | 110 |
| Thr Pro Lys Asp Ser Leu Val Pro Gly Ala Lys Ser Ser Ile Gly Leu |     |     |     |     |     |
|   | 115 |     | 120 |     | 125 |
| Ser Thr Ile Pro Leu Ser Ser Ser Glu Cys Ser Ser Phe Glu Leu Gln |     |     |     |     |     |
|   | 130 |     | 135 |     | 140 |
| Gln Val Ser Ala Cys Ser Glu Pro Ser Met Gln Met Pro Lys Val Gly |     |     |     |     |     |
| 145   |     | 150 |     | 155 | 160 |
| Phe Ala Gly Phe Pro Ser Ser Arg Leu Asp Leu Thr Gly Pro His Phe |     |     |     |     |     |
|   | 165 |     | 170 |     | 175 |
| Glu Ser Ser Ile Leu Ser Pro Cys Glu Asp Val Thr Leu Thr Lys Tyr |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Gln Val Thr Val Pro Arg Ala Ala Leu Ala Pro Glu Leu Ala Leu Glu |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |
| Ile Pro Ser Gly Ser Gln Ala Asp Ile Pro Leu Pro Lys Thr Glu Cys |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |
| Ser Thr Asp Leu Gln Pro Pro Glu Gly Val Pro Thr Ser Gln Ala Glu |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Ser His Ser Gly Pro Leu Asn Ser Met Ile Pro Val Ser Leu Gly Gln |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Val Ser Phe Pro Lys Phe Tyr Lys Pro Lys Phe Val Phe Ser Val Pro |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Gln Met Ala Val Pro Glu Gly Asp Leu His Ala Ala Val Gly Ala Pro |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| Val Met Ser Pro Leu Ser Pro Gly Glu Arg Val Gln Cys Pro Leu Pro |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Ser Thr Gln Leu Pro Ser Pro Gly Thr Cys Val Ser Gln Gly Pro Glu |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| Glu Leu Val Ala Ser Leu Gln Thr Ser Val Val Ala Pro Gly Glu Ala |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Pro Ser Glu Asp Ala Asp His Glu Gly Lys Gly Ser Pro Leu Lys Met |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Pro Lys Ile Lys Leu Pro Ser Phe Arg Trp Ser Pro Lys Lys Glu Thr |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Gly Pro Lys Val Asp Pro Glu Cys Ser Val Glu Asp Ser Lys Leu Ser |     |     |     |     |     |

|   |     |     |     |
|---|-----|-----|-----|
| 370   | 375 | 380 |     |
| Leu Val Leu Asp Lys Asp Glu Val Ala Pro Gln Ser Ala Ile His Met |     |     |     |
| 385   | 390 | 395 | 400 |
| Asp Leu Pro Pro Glu Arg Asp Gly Glu Lys Gly Arg Ser Thr Lys Pro |     |     |     |
| 405   | 410 | 415 |     |
| Gly Phe Ala Met Pro Lys Leu Ala Leu Pro Lys Met Lys Ala Ser Lys |     |     |     |
| 420   | 425 | 430 |     |
| Ser Gly Val Ser Leu Pro Gln Arg Gly Val Asp Pro Ser Leu Ser Ser |     |     |     |
| 435   | 440 | 445 |     |
| Ala Thr Ala Gly Gly Ser Phe Gln Asp Thr Glu Lys Ala Ser Ser Asp |     |     |     |
| 450   | 455 | 460 |     |
| Gly Gly Arg Gly Gly Leu Gly Ala Thr Ala Ser Ala Thr Gly Ser Glu |     |     |     |
| 465   | 470 | 475 | 480 |
| Gly Val Asn Leu His Arg Pro Gln Val His Ile Pro Ser Leu Gly Phe |     |     |     |
| 485   | 490 | 495 |     |
| Ala Lys Pro Asp Leu Arg Ser Ser Lys Ala Lys Val Glu Val Ser Gln |     |     |     |
| 500   | 505 | 510 |     |
| Pro Glu Ala Asp Leu Pro Leu Pro Lys His Asp Leu Ser Thr Glu Gly |     |     |     |
| 515   | 520 | 525 |     |
| Asp Ser Arg Gly Cys Gly Leu Glu Asp Val Pro Val Ser Gln Pro Cys |     |     |     |
| 530   | 535 | 540 |     |
| Gly Glu Gly Ile Ala Pro Thr Pro Glu Asp Pro Leu Gln Pro Ser Cys |     |     |     |
| 545   | 550 | 555 | 560 |
| Arg Lys Pro Asp Ala Glu Val Leu Thr Val Glu Ser Pro Glu Glu Glu |     |     |     |
| 565   | 570 | 575 |     |
| Ala Met Thr Lys Asp Ser Gln Glu Ser Trp Phe Lys Met Pro Lys Phe |     |     |     |
| 580   | 585 | 590 |     |
| Arg Met Pro Ser Leu Arg Arg Ser Phe Arg Asp Arg Gly Gly Ala Gly |     |     |     |
| 595   | 600 | 605 |     |
| Lys Leu Glu Val Ala Gln Thr Gln Ala Pro Ala Ala Thr Gly Gly Glu |     |     |     |
| 610   | 615 | 620 |     |
| Ala Ala Ala Lys Val Lys Glu Phe Leu Val Ser Gly Ser Asn Val Glu |     |     |     |
| 625   | 630 | 635 | 640 |
| Ala Ala Met Ser Leu Gln Leu Pro Glu Ala Asp Ala Glu Val Thr Ala |     |     |     |
| 645   | 650 | 655 |     |
| Ser Glu Ser Lys Ser Ser Thr Asp Ile Leu Arg Cys Asp Leu Asp Ser |     |     |     |

|   |     |     |
|---|-----|-----|
| 660   | 665 | 670 |
| Thr Gly Leu Lys Leu His Leu Ser Thr Ala Gly Met Thr Gly Asp Glu |     |     |
| 675   | 680 | 685 |
| Leu Ser Thr Ser Glu Val Arg Ile His Pro Ser Lys Gly Pro Leu Pro |     |     |
| 690   | 695 | 700 |
| Phe Gln Met Pro Gly Met Arg Leu Pro Glu Thr Gln Val Leu Pro Gly |     |     |
| 705   | 710 | 715 |
| Glu Ile Asp Glu Thr Pro Leu Ser Lys Pro Gly His Asp Leu Ala Ser |     |     |
| 725   | 730 | 735 |
| Met Glu Asp Lys Thr Glu Lys Trp Ser Ser Gln Pro Glu Gly Pro Leu |     |     |
| 740   | 745 | 750 |
| Lys Leu Lys Ala Ser Ser Thr Asp Met Pro Ser Gln Ile Ser Val Val |     |     |
| 755   | 760 | 765 |
| Asn Val Asp Gln Leu Trp Glu Asp Ser Val Leu Thr Val Lys Phe Pro |     |     |
| 770   | 775 | 780 |
| Lys Leu Met Val Pro Arg Phe Ser Phe Ala Ala Pro Ser Ser Glu Asp |     |     |
| 785   | 790 | 795 |
| Asp Val Phe Ile Pro Thr Val Arg Glu Val Gln Cys Pro Glu Ala Asn |     |     |
| 805   | 810 | 815 |
| Ile Asp Thr Ala Leu Cys Lys Glu Ser Pro Gly Leu Trp Gly Ala Ser |     |     |
| 820   | 825 | 830 |
| Ile Leu Lys Ala Gly Ala Gly Val Pro Gly Glu Gln Pro Val Asp Leu |     |     |
| 835   | 840 | 845 |
| Asn Leu Pro Leu Glu Ala Pro Pro Ile Ser Lys Val Arg Val His Ile |     |     |
| 850   | 855 | 860 |
| Gln Gly Ala Gln Val Glu Ser Gln Glu Val Thr Ile His Ser Ile Val |     |     |
| 865   | 870 | 875 |
| Thr Pro Glu Phe Val Asp Leu Ser Val Pro Arg Thr Phe Ser Thr Gln |     |     |
| 885   | 890 | 895 |
| Ile Val Arg Glu Ser Glu Ile Pro Thr Ser Glu Ile Gln Thr Pro Ser |     |     |
| 900   | 905 | 910 |
| Tyr Gly Phe Ser Leu Leu Lys Val Lys Ile Pro Glu Pro His Thr Gln |     |     |
| 915   | 920 | 925 |
| Ala Arg Val Tyr Thr Thr Met Thr Gln His Ser Arg Thr Gln Glu Gly |     |     |
| 930   | 935 | 940 |
| Thr Glu Glu Ala Pro Ile Gln Ala Thr Pro Gly Val Asp Ser Ile Ser |     |     |

945                      950                      955                      960  
 Gly Asp Leu Gln Pro Asp Thr Gly Glu Pro Phe Glu Met Ile Ser Ser  
                          965                      970                      975  
 Ser Val Asn Val Leu Gly Gln Gln Thr Leu Thr Phe Glu Val Pro Ser  
                          980                      985                      990  
 Gly His Gln Leu Ala Asp Ser Cys Ser Asp Glu Glu Pro Ala Glu Ile  
                          995                      1000                      1005  
 Leu Glu Phe Pro Pro Asp Asp Ser Gln Glu Ala Thr Thr Pro Leu Ala  
                          1010                      1015                      1020  
 Asp Glu Gly Arg Ala Pro Lys Asp Lys Pro Glu Ser Lys Lys Ser Gly  
 1025                      1030                      1035                      1040  
 Leu Leu Trp Phe Trp Leu Pro Asn Ile Gly Phe Ser Ser Ser Val Asp  
                          1045                      1050                      1055  
 Glu Thr Gly Val Asp Ser Lys Asn Asp Val Gln Arg Ser Ala Pro Ile  
                          1060                      1065                      1070  
 Gln Thr Gln Pro Glu Ala Arg Pro Glu Ala Glu Leu Pro Lys Lys Gln  
                          1075                      1080                      1085  
 Glu Lys Ala Gly Trp Phe Arg Phe Pro Lys Leu Gly Phe Ser Ser Ser  
                          1090                      1095                      1100  
 Pro Thr Lys Lys Ser Lys Ser Thr Glu Asp Gly Ala Glu Leu Glu Glu  
 1105                      1110                      1115                      1120  
 Gln Lys Leu Gln Glu Glu Thr Ile Thr Phe Phe Asp Ala Arg Glu Ser  
                          1125                      1130                      1135  
 Phe Ser Pro Glu Glu Lys Glu Glu Gly Glu Leu Ile Gly Pro Val Gly  
                          1140                      1145                      1150  
 Thr Gly Leu Asp Ser Arg Val Met Val Thr Ser Ala Ala Arg Thr Glu  
                          1155                      1160                      1165  
 Leu Ile Leu Pro Glu Gln Asp Arg Lys Ala Asp Asp Glu Ser Lys Gly  
                          1170                      1175                      1180  
 Ser Gly Leu Gly Pro Asn Glu Gly  
 1185                      1190

&lt;210&gt; 4326

&lt;211&gt; 503

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4326

Met Ala Gly Leu Trp Leu Gly Leu Val Trp Gln Lys Leu Leu Leu Trp  
 1 5 10 15  
 Gly Ala Ala Ser Ala Leu Ser Leu Ala Gly Ala Ser Leu Val Leu Ser  
 20 25 30  
 Leu Leu Gln Arg Val Ala Ser Tyr Ala Leu Leu Met Lys Pro Asp Gly  
 35 40 45  
 Arg Glu Phe Phe Gln Gln Ile Ile Glu Tyr Thr Glu Glu Tyr Arg His  
 50 55 60  
 Met Pro Leu Leu Lys Leu Trp Val Gly Pro Val Pro Met Val Ala Leu  
 65 70 75 80  
 Tyr Asn Ala Glu Asn Val Glu Val Ile Leu Thr Ser Ser Lys Gln Ile  
 85 90 95  
 Asp Lys Ser Ser Met Tyr Lys Phe Leu Glu Pro Trp Leu Gly Leu Gly  
 100 105 110  
 Leu Leu Thr Ser Thr Gly Asn Lys Trp Arg Ser Arg Arg Lys Met Leu  
 115 120 125  
 Thr Pro Thr Phe His Phe Thr Ile Leu Glu Asp Phe Leu Asp Ile Met  
 130 135 140  
 Asn Glu Gln Ala Asn Ile Leu Val Lys Lys Leu Glu Lys His Ile Asn  
 145 150 155 160  
 Gln Glu Ala Phe Asn Cys Phe Phe Tyr Ile Thr Leu Cys Ala Leu Asp  
 165 170 175  
  
 Ile Ile Cys Glu Thr Ala Met Gly Lys Asn Ile Gly Ala Gln Ser Asn  
 180 185 190  
 Asp Asp Ser Glu Tyr Val Arg Ala Val Tyr Arg Met Ser Glu Met Ile  
 195 200 205  
 Phe Arg Arg Ile Lys Met Pro Trp Leu Trp Leu Asp Leu Trp Tyr Leu  
 210 215 220  
 Met Phe Lys Glu Gly Trp Glu His Lys Lys Ser Leu Lys Ile Leu His  
 225 230 235 240  
 Thr Phe Thr Asn Ser Val Ile Ala Glu Arg Ala Asn Glu Met Asn Ala  
 245 250 255



Asn Glu Asp Cys Arg Gly Asp Gly Arg Gly Ser Ala Pro Ser Lys Asn  
                   260                                  265                                  270  
 Lys Arg Arg Ala Phe Leu Asp Leu Leu Leu Ser Val Thr Asp Asp Glu  
                   275                                  280                                  285  
 Gly Asn Arg Leu Ser His Glu Asp Ile Arg Glu Glu Val Asp Thr Phe  
                   290                                  295                                  300  
 Met Phe Glu Gly His Asp Thr Thr Ala Ala Ala Ile Asn Trp Ser Leu  
 305                                  310                                  315                                  320  
 Tyr Leu Leu Gly Ser Asn Pro Glu Val Gln Lys Lys Val Asp His Glu  
                                   325                                  330                                  335  
 Leu Asp Asp Val Phe Gly Lys Ser Asp Arg Pro Ala Thr Val Glu Asp  
                   340                                  345                                  350  
 Leu Lys Lys Leu Arg Tyr Leu Glu Cys Val Ile Lys Glu Thr Leu Arg  
                   355                                  360                                  365  
 Leu Phe Pro Ser Val Pro Leu Phe Ala Arg Ser Val Ser Glu Asp Cys  
                   370                                  375                                  380  
 Glu Val Ala Gly Tyr Arg Val Leu Lys Gly Thr Glu Ala Val Ile Ile  
 385                                  390                                  395                                  400  
 Pro Tyr Ala Leu His Arg Asp Pro Arg Tyr Phe Pro Asn Pro Glu Glu  
                                   405                                  410                                  415  
 Phe Gln Pro Glu Arg Phe Phe Pro Glu Asn Ala Gln Gly Arg His Pro  
                   420                                  425                                  430  
 Tyr Ala Tyr Val Pro Phe Ser Ala Gly Pro Arg Asn Cys Ile Gly Gln  
                   435                                  440                                  445  
 Lys Phe Ala Val Met Glu Glu Lys Thr Ile Leu Ser Cys Ile Leu Arg  
                   450                                  455                                  460  
 His Phe Trp Ile Glu Ser Asn Gln Lys Arg Glu Glu Leu Gly Leu Glu  
 465                                  470                                  475                                  480  
 Gly Gln Leu Ile Leu Arg Pro Ser Asn Gly Ile Trp Ile Lys Leu Lys  
                                   485                                  490                                  495  
 Arg Arg Asn Ala Asp Glu Arg  
                   500

<210> 4327

<211> 491

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4327

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Met Ser Arg Val Ala Lys Tyr Arg Arg Gln Val Ser Glu Asp Pro Asp
  1             5             10             15
Ile Asp Ser Leu Leu Glu Thr Leu Ser Pro Glu Glu Met Glu Glu Leu
      20             25             30
Glu Lys Glu Leu Asp Val Val Asp Pro Asp Gly Ser Val Pro Val Gly
      35             40             45
Leu Arg Gln Arg Asn Gln Thr Glu Lys Gln Ser Thr Gly Val Tyr Asn
      50             55             60
Arg Glu Ala Met Leu Asn Phe Cys Glu Lys Glu Thr Lys Lys Glu Glu
      65             70             75             80
Glu Lys Lys Gly Ser Asp Arg Asn Thr Gly Leu Ser Arg Asp Lys Asp
      85             90             95
Lys Lys Arg Glu Glu Met Lys Glu Val Ala Lys Lys Glu Asp Asp Glu
      100            105            110
Lys Val Lys Gly Glu Arg Arg Asn Thr Asp Thr Arg Lys Glu Gly Glu
      115            120            125
Lys Met Lys Arg Ala Gly Gly Asn Thr Asp Met Lys Lys Glu Asp Glu
      130            135            140
Lys Val Lys Arg Gly Thr Gly Asn Thr Asp Thr Lys Lys Asp Asp Glu
      145            150            155            160
Lys Val Lys Lys Asn Glu Pro Leu His Glu Lys Glu Ala Lys Asp Asp
      165            170            175
Ser Lys Thr Lys Thr Pro Glu Arg Gln Met Pro Ser Gly Pro Thr Lys
      180            185            190
Pro Ser Glu Gly Pro Ala Lys Val Glu Glu Glu Ala Ala Pro Ser Ile
      195            200            205
Phe Asp Glu Pro Leu Glu Arg Val Lys Asn Asn Asp Pro Glu Met Thr
      210            215            220
Glu Val Asn Val Asn Asn Ser Asp Cys Ile Thr Asn Glu Ile Leu Val
      225            230            235            240
Arg Phe Thr Glu Ala Leu Glu Phe Asn Thr Val Val Lys Leu Phe Ala
      245            250            255

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Leu Ala Asn Thr Arg Ala Asp Asp His Val Ala Phe Ala Ile Ala Ile  
                   260                                  265                                  270  
 Met Leu Lys Ala Asn Lys Thr Ile Thr Ser Leu Asn Leu Asp Ser Asn  
                   275                                  280                                  285  
 His Ile Thr Gly Lys Gly Ile Leu Ala Ile Phe Arg Ala Leu Leu Gln  
                   290                                  295                                  300  
 Asn Asn Thr Leu Thr Glu Leu Arg Phe His Asn Gln Arg His Ile Cys  
 305                                  310                                  315                                  320  
 Gly Gly Lys Thr Glu Met Glu Ile Ala Lys Leu Leu Lys Glu Asn Thr  
                                   325                                  330                                  335  
 Thr Leu Leu Lys Leu Gly Tyr His Phe Glu Leu Ala Gly Pro Arg Met  
                   340                                  345                                  350  
 Thr Val Thr Asn Leu Leu Ser Arg Asn Met Asp Lys Gln Arg Gln Lys  
                   355                                  360                                  365  
 Arg Leu Gln Glu Gln Arg Gln Ala Gln Glu Ala Lys Gly Glu Lys Lys  
                   370                                  375                                  380  
 Asp Leu Leu Glu Val Pro Lys Ala Gly Ala Val Ala Lys Gly Ser Pro  
 385                                  390                                  395                                  400  
 Lys Pro Ser Pro Gln Pro Ser Pro Lys Pro Ser Pro Lys Asn Ser Pro  
                                   405                                  410                                  415  
 Lys Lys Gly Gly Ala Pro Ala Ala Pro Pro Pro Pro Pro Pro Pro Leu  
                   420                                  425                                  430  
 Ala Pro Pro Leu Ile Met Glu Asn Leu Lys Asn Ser Leu Ser Pro Ala  
                   435                                  440                                  445  
 Thr Gln Arg Lys Met Gly Asp Lys Val Leu Pro Ala Gln Glu Lys Asn  
                   450                                  455                                  460  
 Ser Arg Asp Gln Leu Leu Ala Ala Ile Arg Ser Ser Asn Leu Lys Gln  
 465                                  470                                  475                                  480  
 Leu Lys Lys Val Glu Val Pro Lys Leu Leu Gln  
                                   485                                  490

<210> 4328

<211> 116

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4328

Met Arg Leu Asn Ile Leu Pro Arg Arg Arg Arg Gly Arg Pro Arg  
 1 5 10 15  
 Pro Gly Pro Gly Asp Arg Gly Ala Asp Pro Gly Thr Glu Pro Gly Phe  
 20 25 30  
 Val Arg Glu Ala Asp Ala Pro Arg Ala Pro Pro Pro Lys His Ser His  
 35 40 45  
 Pro Met Leu Arg Arg Ala Ser Gly Ser Pro Trp Ala Pro Arg Gly Glu  
 50 55 60  
 Pro Gly Ala Pro Gly Gly Ser Ser Gly Glu Leu Pro Ala Gly Ala Gly  
 65 70 75 80  
 Arg Cys Trp Trp Glu Ala Arg Cys Thr Trp Arg Pro Gly Met Ser Gly  
 85 90 95  
 Arg Pro Arg Ser Arg Cys Ile Arg Pro Leu Pro Ala Arg Pro Asp Val  
 100 105 110  
 Pro Ala Gly Ser  
 115

&lt;210&gt; 4329

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4329

Met Ala Pro Pro Ala Pro Gly Pro Ala Ser Gly Gly Ser Gly Glu Val  
 1 5 10 15  
 Asp Glu Leu Phe Asp Val Lys Asn Ala Phe Tyr Ile Gly Ser Tyr Gln  
 20 25 30  
 Gln Cys Ile Asn Glu Ala Gln Arg Val Lys Leu Ser Ser Pro Glu Arg  
 35 40 45  
 Asp Val Glu Arg Asp Val Phe Leu Tyr Arg Ala Tyr Leu Ala Gln Arg  
 50 55 60  
 Lys Phe Gly Val Val Leu Asp Glu Ile Lys Pro Ser Ser Ala Pro Glu  
 65 70 75 80

Leu Gln Ala Val Arg Met Phe Ala Asp Tyr Leu Ala His Glu Ser Arg  
                     85                    90                    95  
 Ser Thr Ala Met Thr Val Gln Ile Leu Leu Lys Leu Asp Arg Leu Asp  
                     100                    105                    110  
 Leu Ala Arg Lys Glu Leu Lys Arg Met Gln Asp Leu Asp Glu Asp Ala  
                     115                    120                    125  
 Thr Leu Thr Gln Leu Ala Thr Ala Trp Val Ser Leu Ala Thr Gly Gly  
                     130                    135                    140  
 Glu Lys Leu Gln Asp Ala Tyr Tyr Ile Phe Gln Glu Met Ala Asp Lys  
 145                    150                    155                    160  
 Cys Ser Pro Thr Leu Leu Leu Leu Asn Gly Gln Ala Ala Cys His Met  
                     165                    170                    175  
 Ala Gln Gly Arg Trp Glu Ala Ala Glu Gly Leu Leu Gln Glu Ala Leu  
                     180                    185                    190  
 Asp Lys Asp Ser Gly Tyr Pro Glu Thr Leu Val Asn Leu Ile Val Leu  
                     195                    200                    205  
 Ser Gln His Leu Gly Lys Pro Pro Glu Val Thr Asn Arg Tyr Leu Ser  
                     210                    215                    220  
 Gln Leu Lys Asp Ala His Arg Ser His Pro Phe Ile Lys Glu Tyr Gln  
 225                    230                    235                    240  
 Ala Lys Glu Asn Asp Phe Asp Arg Leu Val Leu Gln Tyr Ala Pro Ser  
                     245                    250                    255  
 Ala

<210> 4330

<211> 119

<212> PRT

<213> Homo sapiens

<400> 4330

Met Asn Asn Ala Ala Ile Ile Asn Ile His Thr Ser Phe Leu Trp Thr  
                     1                    5                    10                    15  
 Trp Phe His Phe Leu Gly Ile Cys Pro Ala Val Glu Phe Leu Gly His  
                     20                    25                    30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Leu | Leu | Thr | Met | Ile | Ser | Leu | Leu | Glu | Lys | Leu | Pro | Asp | Phe | Leu | Leu |  |
| 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |     |     |  |
| Ile | Phe | Phe | Phe | Phe | Leu | Leu | Leu | Cys | Ser | Val | Lys | Lys | Pro | Phe | Asn |  |
| 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |     |  |
| Ala | Tyr | Glu | Leu | Lys | Pro | Cys | Lys | Glu | Ser | Asp | His | Leu | Gly | Leu | Asp |  |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |  |
| Arg | Lys | Leu | Leu | Asp | Phe | Lys | Cys | Ile | Thr | Leu | Arg | Ile | Phe | Cys | Asp |  |
| 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |     |     |     |  |
| Ser | Leu | Ala | Ser | Pro | Leu | Ser | Ser | Leu | Phe | Phe | Leu | Arg | Ile | His | Glu |  |
| 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |     |     |     |  |
| Leu | Ala | Pro | Cys | Leu | His | Ile |     |     |     |     |     |     |     |     |     |  |
| 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |

&lt;210&gt; 4331

&lt;211&gt; 934

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4331

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Thr | Leu | Glu | Glu | Phe | Arg | Glu | Leu | Arg | Glu | Gln | Pro | Ser | Asp |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Pro | Gln | Ala | Glu | Gln | Glu | Leu | Ile | Asn | Ser | Ile | Glu | Gln | Val | Tyr | Phe |
|     |     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |
| Ser | Val | Asp | Ser | Phe | Asp | Ile | Val | Lys | Tyr | Glu | Leu | Glu | Lys | Leu | Pro |
|     |     | 35  |     |     |     |     |     | 40  |     |     |     |     |     | 45  |     |
| Pro | Val | Leu | Asn | Leu | Gln | Glu | Leu | Glu | Ala | Tyr | Arg | Asp | Lys | Leu | Lys |
|     | 50  |     |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |
| Gln | His | Gln | Ala | Ala | Val | Ser | Lys | Lys | Val | Ala | Asp | Leu | Ile | Leu | Glu |
| 65  |     |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     | 80  |
| Lys | Gln | Pro | Ala | Tyr | Val | Lys | Glu | Leu | Glu | Arg | Val | Thr | Ser | Leu | Gln |
|     |     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |
| Thr | Gly | Leu | Gln | Leu | Ala | Ala | Val | Ile | Cys | Thr | Asn | Gly | Arg | Arg | His |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |
| Leu | Asn | Ile | Ala | Lys | Glu | Gly | Phe | Thr | Gln | Ala | Ser | Leu | Gly | Leu | Leu |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |

Ala Asn Gln Arg Lys Arg Gln Leu Leu Ile Gly Leu Leu Lys Ser Leu  
 130 135 140  
 Arg Thr Ile Lys Thr Leu Gln Arg Thr Asp Val Arg Leu Ser Glu Met  
 145 150 155 160  
 Leu Glu Glu Glu Asp Tyr Pro Gly Ala Ile Gln Leu Cys Leu Glu Cys  
 165 170 175  
 Gln Lys Ala Ala Ser Thr Phe Lys His Tyr Ser Cys Ile Ser Glu Leu  
 180 185 190  
 Asn Ser Lys Leu Gln Asp Thr Leu Glu Gln Ile Glu Glu Gln Leu Asp  
 195 200 205  
 Val Ala Leu Ser Lys Ile Cys Lys Asn Phe Asp Ile Asn His Tyr Thr  
 210 215 220  
 Lys Val Gln Gln Ala Tyr Arg Leu Leu Gly Lys Thr Gln Thr Ala Met  
 225 230 235 240  
 Asp Gln Leu His Met His Phe Thr Gln Ala Ile His Asn Thr Val Phe  
 245 250 255  
 Gln Val Val Leu Gly Tyr Val Glu Leu Cys Ala Gly Asn Thr Asp Thr  
 260 265 270  
 Lys Phe Gln Lys Leu Gln Tyr Lys Asp Leu Cys Thr His Val Thr Pro  
 275 280 285  
 Asp Ser Tyr Ile Pro Cys Leu Ala Asp Leu Cys Lys Ala Leu Trp Glu  
 290 295 300  
 Val Met Leu Ser Tyr Tyr Arg Thr Met Glu Trp His Glu Lys His Asp  
 305 310 315 320  
 Asn Glu Asp Thr Ala Ser Ala Ser Glu Gly Ser Asn Met Ile Gly Thr  
 325 330 335  
 Glu Glu Thr Asn Phe Asp Arg Gly Tyr Ile Lys Lys Lys Leu Glu His  
 340 345 350  
 Gly Leu Thr Arg Ile Trp Gln Asp Val Gln Leu Lys Val Lys Thr Tyr  
 355 360 365  
 Leu Leu Gly Thr Asp Leu Ser Ile Phe Lys Tyr Asp Asp Phe Ile Phe  
 370 375 380  
 Val Leu Asp Ile Ile Ser Arg Leu Met Gln Val Gly Glu Glu Phe Cys  
 385 390 395 400  
 Gly Ser Lys Ser Glu Val Leu Gln Glu Ser Ile Arg Lys Gln Ser Val  
 405 410 415

|   |     |     |     |
|---|-----|-----|-----|
| Asn Tyr Phe Lys Asn Tyr His Arg Thr Arg Leu Asp Glu Leu Arg Met |     |     |     |
| 420   | 425 | 430 |     |
| Phe Leu Glu Asn Glu Thr Trp Glu Leu Cys Pro Val Lys Ser Asn Phe |     |     |     |
| 435   | 440 | 445 |     |
| Ser Ile Leu Gln Leu His Glu Phe Lys Phe Met Glu Gln Ser Arg Ser |     |     |     |
| 450   | 455 | 460 |     |
| Pro Ser Val Ser Pro Ser Lys Gln Pro Val Ser Thr Ser Ser Lys Thr |     |     |     |
| 465   | 470 | 475 | 480 |
| Val Thr Leu Phe Glu Gln Tyr Cys Ser Gly Gly Asn Pro Phe Glu Ile |     |     |     |
| 485   | 490 | 495 |     |
| Gln Ala Asn His Lys Asp Glu Glu Thr Glu Asp Val Leu Ala Ser Asn |     |     |     |
| 500   | 505 | 510 |     |
| Gly Tyr Glu Ser Asp Glu Gln Glu Lys Ser Ala Tyr Gln Glu Tyr Asp |     |     |     |
| 515   | 520 | 525 |     |
| Ser Asp Ser Asp Val Pro Glu Glu Leu Lys Arg Asp Tyr Val Asp Glu |     |     |     |
| 530   | 535 | 540 |     |
| Gln Thr Gly Asp Gly Pro Val Lys Ser Val Ser Arg Glu Thr Leu Lys |     |     |     |
| 545   | 550 | 555 | 560 |
| Ser Arg Lys Lys Ser Asp Tyr Ser Leu Asn Lys Val Asn Ala Pro Ile |     |     |     |
| 565   | 570 | 575 |     |
| Leu Thr Asn Thr Thr Leu Asn Val Ile Arg Leu Val Gly Lys Tyr Met |     |     |     |
| 580   | 585 | 590 |     |
| Gln Met Met Asn Ile Leu Lys Pro Ile Ala Phe Asp Val Ile His Phe |     |     |     |
| 595   | 600 | 605 |     |
| Met Ser Gln Leu Phe Asp Tyr Tyr Leu Tyr Ala Ile Tyr Thr Phe Phe |     |     |     |
| 610   | 615 | 620 |     |
| Gly Arg Asn Asp Ser Leu Glu Ser Thr Gly Leu Gly Leu Ser Ser Ser |     |     |     |
| 625   | 630 | 635 | 640 |
| Arg Leu Arg Thr Thr Leu Asn Arg Ile Gln Glu Ser Leu Ile Asp Leu |     |     |     |
| 645   | 650 | 655 |     |
| Glu Val Ser Ala Asp Pro Thr Ala Thr Leu Thr Ala Ala Glu Glu Arg |     |     |     |
| 660   | 665 | 670 |     |
| Lys Glu Lys Val Pro Ser Pro His Leu Ser His Leu Val Val Leu Thr |     |     |     |
| 675   | 680 | 685 |     |
| Ser Gly Asp Thr Leu Tyr Gly Leu Ala Glu Arg Val Val Ala Thr Glu |     |     |     |
| 690   | 695 | 700 |     |



Ser Leu Val Phe Leu Ala Glu Gln Phe Glu Phe Leu Gln Pro His Leu  
 705                      710                      715                      720  
 Asp Ala Val Met Pro Ala Val Lys Lys Pro Phe Leu Gln Gln Phe Tyr  
                          725                      730                      735  
 Ser Gln Thr Val Ser Thr Ala Ser Glu Leu Arg Lys Pro Ile Tyr Trp  
                          740                      745                      750  
 Ile Val Ala Gly Lys Ala Leu Asp Tyr Glu Gln Met Leu Leu Leu Met  
                          755                      760                      765  
 Ala Asn Val Lys Trp Asp Val Lys Glu Ile Met Ser Gln His Asn Ile  
                          770                      775                      780  
 Tyr Val Asp Ala Leu Leu Lys Glu Phe Glu Gln Phe Asn Arg Arg Leu  
 785                      790                      795                      800  
 Asn Glu Val Ser Lys Arg Val Arg Ile Pro Leu Pro Val Ser Asn Ile  
                          805                      810                      815  
 Leu Trp Glu His Cys Ile Arg Leu Ala Asn Arg Thr Ile Val Glu Gly  
                          820                      825                      830  
 Tyr Ala Asn Val Lys Lys Cys Ser Asn Glu Gly Arg Ala Leu Met Gln  
                          835                      840                      845  
 Leu Asp Phe Gln Gln Phe Leu Met Lys Leu Glu Lys Leu Thr Asp Ile  
                          850                      855                      860  
 Arg Pro Ile Pro Asp Lys Glu Phe Val Glu Thr Tyr Ile Lys Ala Tyr  
 865                      870                      875                      880  
 Tyr Leu Thr Glu Asn Asp Met Glu Arg Trp Ile Lys Glu His Arg Glu  
                          885                      890                      895  
 Tyr Ser Thr Lys Gln Leu Thr Asn Leu Val Asn Val Cys Leu Gly Ser  
                          900                      905                      910  
 His Ile Asn Lys Lys Ala Arg Gln Lys Leu Leu Ala Ala Ile Asp Asp  
                          915                      920                      925  
 Ile Asp Arg Pro Lys Arg  
                          930

<210> 4332

<211> 107

<212> PRT

<213> Homo sapiens

&lt;400&gt; 4332

Met Glu Ala Val Arg Thr Leu Gly Ser Ser Val Pro Leu Leu Ser Val  
 1 5 10 15  
 Gly Pro Leu Arg Asn Pro Glu Phe Leu Val Gly Leu Leu Leu Leu Ser  
 20 25 30  
 His Ile Pro Pro Tyr Pro Gly Met Cys Arg Phe Leu Leu Asp Leu Ser  
 35 40 45  
 Thr Gly Pro Cys Val Gln Ser Gln Phe Ile Leu Val Asp Pro His Phe  
 50 55 60  
 His Pro Arg Ile His Phe His His Ser Gln Ser Leu Ser Ser Ile Met  
 65 70 75 80  
 Arg Arg Ser Gly Met Gln Ala Phe Cys Val Phe Ile Pro Ala Thr Ala  
 85 90 95  
 Leu Thr Leu Met Glu Arg Ala Gly Trp Gly Gly  
 100 105

&lt;210&gt; 4333

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4333

Met Arg Leu Ala Asn Phe Ser Tyr Phe Trp Ile Glu Thr Gly Phe His  
 1 5 10 15  
 Arg Val Ala Gln Ala Gly Leu Glu Leu Leu Gly Ser Ser Asp Pro Pro  
 20 25 30  
 Thr Leu Ala Ser Gln Arg Val Gly Ile Thr Gly Val Ser His Cys Ser  
 35 40 45  
 Gln Leu Leu Gly Arg Leu Gly His Glu Asn Cys Phe Asn Pro Glu Gly  
 50 55 60  
 Gly Val Cys Ser Glu Pro Arg Ser Cys His Cys Thr Pro Ala Trp Ala  
 65 70 75 80  
 Thr Glu Gly Asp Ser Val Ser Lys Lys Lys Lys Lys Val Lys Glu Gly  
 85 90 95

Phe Pro Glu Trp Pro Leu Asp

100

<210> 4334

<211> 103

<212> PRT

<213> Homo sapiens

<400> 4334

Met Val Val Val Pro Ile Met Glu Asn Leu Leu Lys Ile Asn Cys Asn

1

5

10

15

Gly Leu Arg Thr Pro Pro Pro His Val Arg Ala Tyr Glu Gly Ile Phe

20

25

30

Phe Leu Arg Gln Lys Lys Glu His Cys Arg Arg Pro Ser Asp Phe Phe

35

40

45

Phe Pro Leu Phe Leu Phe Gln Arg Ala His Leu Leu Asp Asn Thr Glu

50

55

60

Arg Leu Glu Arg Ser Ser Arg Arg Leu Glu Ala Gly Tyr Gln Ile Ala

65

70

75

80

Val Glu Thr Gly Lys Asn Ser Glu Ser Glu Gln Ile Val Leu Leu Met

85

90

95

His Ser Ser Leu His Asn Thr

100

<210> 4335

<211> 115

<212> PRT

<213> Homo sapiens

<400> 4335

Met Glu Glu Gly Asn Thr Ser Thr Val Thr Gln Gln Val Arg Gly Arg

1

5

10

15

Thr Arg Thr Lys Pro Arg Ser Leu His Leu Ser Pro Gly Leu Leu Val

20

25

30

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Phe | Leu | Gln | Glu | Gly | Leu | Ser | Lys | Ser | Ala | Gly | Ala | Gln | Arg | Gln |
| 35  |     |     |     | 40  |     |     |     | 45  |     |     |     |     |     |     |     |
| Gly | Pro | Thr | Tyr | Pro | Cys | Arg | Asp | Thr | Glu | Arg | Thr | Lys | Thr | Lys | Pro |
| 50  |     |     |     | 55  |     |     |     | 60  |     |     |     |     |     |     |     |
| Gln | Gly | Gly | Gln | Gln | Pro | Gln | Thr | Ser | His | Gly | Leu | Gly | Leu | Phe | Ser |
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |
| Ile | Tyr | Leu | Gly | Arg | Phe | Ile | Lys | Ser | Thr | Phe | Phe | Arg | Glu | Leu | Arg |
|     |     |     |     | 85  |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Lys | Glu | Lys | Lys | Tyr | Ala | Pro | Phe | Leu | Ser | Leu | Gly | Asp | Ser | Tyr | Ser |
| 100 |     |     |     | 105 |     |     |     | 110 |     |     |     |     |     |     |     |
| Arg | Gly | Thr |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 115 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

<210> 4336

&lt;211&gt; 257

&lt;212&gt; PRT

⟨213⟩ Homo sapiens

<400> 4336

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Pro | Leu | Ala | Cys | Glu | His | Pro | Val | Gly | Val | Ser | Ser | Ser | Val | Gly |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |
| Asn | Ala | Gly | Arg | Ala | Gly | Val | Gly | Thr | Gln | Ala | Trp | Gly | Thr | Thr | Glu |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Arg | Thr | Gln | His | Pro | Gly | Pro | Ala | Gln | His | Cys | Pro | Cys | Gly | Leu | Arg |
|     |     |     |     | 35  |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Val | Phe | Val | Leu | Gln | Glu | Lys | Arg | Val | Val | Ser | Arg | Asn | Trp | Ala | Arg |
|     |     |     |     | 50  |     |     | 55  |     |     |     | 60  |     |     |     |     |
| Gly | Thr | Cys | Gly | Pro | Arg | Val | Thr | Asn | Gly | Met | Leu | Glu | Asp | Glu | Asp |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ala | Glu | Asp | His | Gly | Gly | Thr | Phe | Cys | Leu | Gly | Glu | Leu | Val | Glu | Leu |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ala | Val | Thr | Met | Glu | Asn | Lys | Ala | Glu | Gly | Lys | Arg | Ile | Val | Ser | Glu |
|     |     |     |     | 100 |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Lys | Pro | Thr | Arg | Ala | Arg | Asn | Gln | Gly | Ile | Glu | Gly | Ser | Pro | Gly | Gly |
|     |     |     |     | 115 |     |     | 120 |     |     |     |     | 125 |     |     |     |

Arg Val Thr Arg Ser Pro Pro Thr Gln Val Ala Ile Ser Ser Asp Ser  
 130 135 140  
 Ala Arg Lys Gly Ser Trp Glu Pro Trp Ser Arg Pro Val Gly Glu Pro  
 145 150 155 160  
 Pro Glu Ala Gly Trp Asp Tyr Ala Gln Trp Lys Gln Glu Arg Glu Gln  
 165 170 175  
 Ile Asp Leu Ala Arg Leu Ala Arg His Arg Asp Ala Gln Gly Asp Trp  
 180 185 190  
 Arg Arg Pro Trp Asp Leu Asp Lys Ala Lys Ser Thr Leu Gln Asp Cys  
 195 200 205  
 Ser Gln Leu Arg Gly Glu Gly Pro Ala Arg Ala Gly Ser Arg Arg Gly  
 210 215 220  
 Glu Pro Thr Pro Thr Ser Ser Leu Pro Ser Leu Ala Leu Phe Ile Phe  
 225 230 235 240  
 His Pro Leu Val Leu Ser Phe Leu Cys Leu Leu Val Ser Tyr Phe Gln  
 245 250 255  
 Ser

<210> 4337

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4337

Met Pro Ser Arg Gln Leu Glu Asp Pro Gly Ala Gly Thr Pro Ser Pro  
 1 5 10 15  
 Val Arg Leu His Ala Leu Ala Gly Phe Gln Gln Arg Ala Leu Cys His  
 20 25 30  
 Ala Leu Thr Phe Pro Ser Leu Gln Arg Leu Val Tyr Ser Met Cys Ser  
 35 40 45  
 Leu Cys Gln Glu Glu Asn Glu Asp Met Val Pro Asp Ala Leu Gln Gln  
 50 55 60  
 Asn Pro Gly Ala Phe Arg Leu Ala Pro Ala Leu Pro Ala Arg Pro His  
 65 70 75 80

Arg Gly Leu Ser Thr Phe Pro Gly Ala Glu His Cys Leu Arg Ala Ser  
                     85                    90                    95  
 Pro Lys Thr Thr Leu Ser Gly Gly Phe Phe Val Ala Val Ile Glu Arg  
                     100                    105                    110  
 Val Glu Met Pro Thr  
                     115

<210> 4338

<211> 232

<212> PRT

<213> Homo sapiens

<400> 4338

Met Leu Met Glu Thr Ala Ala Arg Thr Ala Arg Ala Thr Ser Cys Pro  
   1                    5                    10                    15  
 Val Gln Gly Asp Gly Gln Glu Val Thr Cys Arg Gly Ala Leu Ala Leu  
                     20                    25                    30  
 Pro Ser Ala Gln Leu Asp Leu Leu Gly Leu Gly Leu Val Glu Pro Gly  
                     35                    40                    45  
 Thr Gln Cys Gly Pro Arg Met Val Cys Gln Ser Arg Arg Cys Arg Lys  
                     50                    55                    60  
 Asn Ala Phe Gln Glu Leu Gln Arg Cys Leu Thr Ala Cys His Ser His  
   65                    70                    75                    80  
 Gly Val Cys Asn Ser Asn His Asn Cys His Cys Ala Pro Gly Trp Ala  
                     85                    90                    95  
 Pro Pro Phe Cys Asp Lys Pro Gly Phe Gly Gly Ser Met Asp Ser Gly  
                     100                    105                    110  
 Pro Val Gln Ala Glu Asn His Asp Thr Phe Leu Leu Ala Met Leu Leu  
                     115                    120                    125  
 Ser Val Leu Leu Pro Leu Leu Pro Gly Ala Gly Leu Ala Trp Cys Cys  
                     130                    135                    140  
 Tyr Arg Leu Pro Gly Ala His Leu Gln Arg Cys Ser Trp Gly Cys Arg  
   145                    150                    155                    160  
 Arg Asp Pro Ala Cys Ser Gly Pro Lys Asp Gly Pro His Arg Asp His  
                     165                    170                    175

Pro Leu Gly Gly Val His Pro Thr Glu Leu Gly Pro Thr Ala Thr Gly  
                   180                  185                  190  
 Gln Ser Trp Pro Leu Asp Pro Glu Asn Ser His Glu Pro Ser Ser His  
                   195                  200                  205  
 Pro Glu Lys Pro Leu Pro Ala Val Ser Pro Asp Pro Gln Asp Gln Val  
                   210                  215                  220  
 Gln Met Pro Arg Ser Cys Leu Trp  
 225                  230

<210> 4339

<211> 141

<212> PRT

<213> Homo sapiens

<400> 4339

Met Met Gly Ser Thr His Ile Tyr Asp Met Ser Thr Val Met Ser Arg  
   1                  5                  10                  15  
 Lys Gly Pro Ala Pro Glu Leu Gln Gly Val Glu Val Ala Leu Ala Pro  
                   20                  25                  30  
 Glu Glu Leu Glu Leu Asp Pro Met Ala Met Thr Gln Lys Tyr Glu Glu  
                   35                  40                  45  
 His Val Arg Glu Gln Gln Ala Gln Val Glu Lys Glu Asp Phe Ser Asp  
                   50                  55                  60  
 Met Val Ala Glu His Ala Ala Lys Gln Lys Val Gly Ala Ser Arg Gly  
   65                  70                  75                  80  
 Ala Gly Leu Gly Glu Ser Gln Gly Pro Trp Pro Ala Val Phe Ser Gly  
                   85                  90                  95  
 Met Val Pro Ser Ser Gly Glu Ser Glu Gly Gly Leu Cys Leu Leu Leu  
                   100                  105                  110  
 Cys Ala Ser Leu Asp Leu Glu Val Leu Glu Ile Leu Gln Trp Ala Ala  
                   115                  120                  125  
 Leu Phe Lys Asp Asp Glu Gly Glu Glu Leu Ser Gln Val  
                   130                  135                  140

&lt;210&gt; 4340

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4340

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Met Ser Gln Ile Arg Lys Leu Asp Glu Asp Ala Ser Pro Asn Glu Glu
  1             5             10             15
Lys Gly Asp Val Pro Lys Asp Thr Leu Asp Asp Leu Phe Pro Asn Glu
             20             25             30
Asp Glu Gln Ser Pro Ala Pro Ser Pro Gly Gly Gly Asp Val Ser Gly
             35             40             45
Gln His Gly Gly Tyr Glu Ile Pro Ala Arg Leu Arg Ile Leu His Asn
             50             55             60
Leu Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val Ala Val Pro
             65             70             75             80
Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His Asp
             85             90             95
His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr Arg
             100            105            110
Asp Gln Asn Lys Tyr Lys Glu Ala Ala His Leu Leu Asn Asp Ala Leu
             115            120            125
Ala Ile Arg Glu Lys Thr Leu Gly Lys Asp His Pro Ala Val Ala Ala
             130            135            140
Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys
             145            150            155            160
Glu Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val
             165            170            175
Leu Gly Lys Phe His Pro Asp Val Ala Lys Gln Leu Ser Asn Leu Ala
             180            185            190
Leu Leu Cys Gln Asn Gln Gly Lys Ala Glu Glu Val Glu Tyr Tyr Tyr
             195            200            205
Arg Arg Ala Leu Glu Ile Tyr Ala Thr Arg Leu Gly Pro Asp Asp Pro
             210            215            220
Asn Val Ala Lys Thr Lys Asn Asn Leu Ala Ser Cys Tyr Leu Lys Gln
             225            230            235            240

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Gly Lys Tyr Gln Asp Ala Glu Thr Leu Tyr Lys Glu Ile Leu Thr Arg  
                           245                          250                          255  
 Ala His Glu Lys Glu Phe Gly Ser Val Asn Gly Asp Asn Lys Pro Ile  
                           260                          265                          270  
 Trp Met His Ala Glu Glu Arg Glu Glu Ser Lys Asp Lys Arg Arg Asp  
                           275                          280                          285  
 Ser Ala Pro Tyr Gly Glu Tyr Gly Ser Trp Tyr Lys Ala Cys Lys Val  
                           290                          295                          300  
 Asp Ser Pro Ile Val Asn Thr Thr Leu Arg Ser Leu Gly Ala Leu Tyr  
 305                          310                          315                          320  
 Arg Arg Gln Gly Lys Leu Glu Ala Ala His Thr Leu Glu Asp Cys Ala  
                           325                          330                          335  
 Ser Arg Thr Ala Ser Arg Val Trp Thr Pro Gln Ala Arg Pro Arg Trp  
                           340                          345                          350

<210> 4341

<211> 112

<212> PRT

<213> Homo sapiens

<400> 4341

Met Val Arg Trp Val Pro Thr Arg Arg Val Val Val Ile Cys Asp Gly  
   1                          5                          10                          15  
 Thr Cys Ser His Thr Leu Leu Cys Thr Pro Pro Gly Ser Pro Lys Ser  
                           20                          25                          30  
 Leu His Ala Gly Ser Pro His Pro Ser Cys Ser Arg Lys His Val Arg  
                           35                          40                          45  
 Lys Gln Ser Arg Arg Leu Leu Arg Gly Arg His Glu Ser Thr Leu Val  
                           50                          55                          60  
  
 Leu Lys Pro Phe Pro Asn Val Leu Val Asp Cys Val Val Leu Pro Lys  
   65                          70                          75                          80  
 Leu Pro Ala Ala Gly Ala Arg Glu Val Thr Pro Ala Gly Ala Ala Ala  
                           85                          90                          95  
 Gly Gly Ser Pro Arg Trp Leu Ala Leu Phe Leu Phe Cys Phe Phe Phe

100

105

110

&lt;210&gt; 4342

&lt;211&gt; 1253

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4342

Met Gln Ala Asp Lys Cys Arg Thr Ser Ser Arg Ser Val Lys Lys Glu  
 1 5 10 15  
 Leu Val Ile Glu Ser Pro Leu Gln Tyr Lys Asp Ala Ala Gln Gly Glu  
 20 25 30  
 Val Glu Ala Glu Ser Pro Gly Pro Val Pro Ala Lys Pro Lys Leu Ile  
 35 40 45  
 Glu Pro Leu Asp Tyr Glu Asn Val Ile Val Gln Lys Lys Thr Gln Ile  
 50 55 60  
 Leu Asn Asp Cys Leu Arg Glu Met Leu Leu Phe Pro Tyr Asp Asp Phe  
 65 70 75 80  
 Gln Thr Ala Ile Leu Arg Arg Gln Gly Arg Tyr Ile Cys Ser Thr Val  
 85 90 95  
 Pro Ala Lys Ala Glu Glu Glu Ala Gln Ser Leu Phe Val Thr Glu Cys  
 100 105 110  
 Ile Lys Thr Tyr Asn Ser Asp Trp His Leu Val Asn Tyr Lys Tyr Glu  
 115 120 125  
 Asp Tyr Ser Gly Glu Phe Arg Gln Leu Pro Asn Lys Val Val Lys Leu  
 130 135 140  
 Asp Lys Leu Pro Val His Val Tyr Glu Val Asp Glu Glu Val Asp Lys  
 145 150 155 160  
 Asp Glu Asp Ala Ala Ser Leu Gly Pro Gln Lys Gly Gly Ile Thr Lys  
 165 170 175  
 His Gly Trp Leu Tyr Lys Gly Asn Met Asn Ser Ala Ile Ser Val Thr  
 180 185 190  
 Met Arg Ser Phe Lys Arg Arg Phe Phe His Leu Ile Gln Leu Gly Asp  
 195 200 205  
 Gly Ser Tyr Asn Leu Asn Phe Tyr Lys Asp Glu Lys Ile Ser Lys Glu

|   |     |     |     |
|---|-----|-----|-----|
| 210   | 215 | 220 |     |
| Pro Lys Gly Ser Ile Phe Leu Asp Ser Cys Met Gly Val Val Gln Asn |     |     |     |
| 225   | 230 | 235 | 240 |
| Asn Lys Val Arg Arg Phe Ala Phe Glu Leu Lys Met Gln Asp Lys Ser |     |     |     |
|   | 245 | 250 | 255 |
| Ser Tyr Leu Leu Ala Ala Asp Ser Glu Val Glu Met Glu Glu Trp Ile |     |     |     |
|   | 260 | 265 | 270 |
| Thr Ile Leu Asn Lys Ile Leu Gln Leu Asn Phe Glu Ala Ala Met Gln |     |     |     |
|   | 275 | 280 | 285 |
| Glu Lys Arg Asn Gly Asp Pro His Glu Asp Asp Glu Gln Ser Lys Leu |     |     |     |
| 290   | 295 | 300 |     |
| Glu Gly Ser Gly Ser Gly Leu Asp Ser Tyr Leu Pro Glu Leu Ala Lys |     |     |     |
| 305   | 310 | 315 | 320 |
| Ser Ala Arg Glu Ala Glu Ile Lys Leu Lys Ser Glu Ser Arg Val Lys |     |     |     |
|   | 325 | 330 | 335 |
| Leu Phe Tyr Leu Asp Pro Asp Ala Gln Lys Leu Asp Phe Ser Ser Ala |     |     |     |
|   | 340 | 345 | 350 |
| Glu Pro Glu Val Lys Ser Phe Glu Glu Lys Phe Gly Lys Arg Ile Leu |     |     |     |
|   | 355 | 360 | 365 |
| Val Lys Cys Asn Asp Leu Ser Phe Asn Leu Gln Cys Cys Val Ala Glu |     |     |     |
| 370   | 375 | 380 |     |
| Asn Glu Glu Gly Pro Thr Thr Asn Val Glu Pro Phe Phe Val Thr Leu |     |     |     |
| 385   | 390 | 395 | 400 |
| Ser Leu Phe Asp Ile Lys Tyr Asn Arg Lys Ile Ser Ala Asp Phe His |     |     |     |
|   | 405 | 410 | 415 |
| Val Asp Leu Asn His Phe Ser Val Arg Gln Met Leu Ala Thr Thr Ser |     |     |     |
|   | 420 | 425 | 430 |
| Pro Ala Leu Met Asn Gly Ser Gly Gln Ser Pro Ser Val Leu Lys Gly |     |     |     |
|   | 435 | 440 | 445 |
| Ile Leu His Glu Ala Ala Met Gln Tyr Pro Lys Gln Gly Ile Phe Ser |     |     |     |
| 450   | 455 | 460 |     |
| Val Thr Cys Pro His Pro Asp Ile Phe Leu Val Ala Arg Ile Glu Lys |     |     |     |
| 465   | 470 | 475 | 480 |
| Val Leu Gln Gly Ser Ile Thr His Cys Ala Glu Pro Tyr Met Lys Ser |     |     |     |
|   | 485 | 490 | 495 |
| Ser Asp Ser Ser Lys Val Ala Gln Lys Val Leu Lys Asn Ala Lys Gln |     |     |     |

|   |     |     |
|---|-----|-----|
| 500   | 505 | 510 |
| Ala Cys Gln Arg Leu Gly Gln Tyr Arg Met Pro Phe Ala Trp Ala Ala |     |     |
| 515   | 520 | 525 |
| Arg Thr Leu Phe Lys Asp Ala Ser Gly Asn Leu Asp Lys Asn Ala Arg |     |     |
| 530   | 535 | 540 |
| Phe Ser Ala Ile Tyr Arg Gln Asp Ser Asn Lys Leu Ser Asn Asp Asp |     |     |
| 545   | 550 | 555 |
| Met Leu Lys Leu Leu Ala Asp Phe Arg Lys Pro Glu Lys Met Ala Lys |     |     |
| 565   | 570 | 575 |
| Leu Pro Val Ile Leu Gly Asn Leu Asp Ile Thr Ile Asp Asn Val Ser |     |     |
| 580   | 585 | 590 |
| Ser Asp Phe Pro Asn Tyr Val Asn Ser Ser Tyr Ile Pro Thr Lys Gln |     |     |
| 595   | 600 | 605 |
| Phe Glu Thr Cys Ser Lys Thr Pro Ile Thr Phe Glu Val Glu Glu Phe |     |     |
| 610   | 615 | 620 |
| Val Pro Cys Ile Pro Lys His Thr Gln Pro Tyr Thr Ile Tyr Thr Asn |     |     |
| 625   | 630 | 635 |
| His Leu Tyr Val Tyr Pro Lys Tyr Leu Lys Tyr Asp Ser Gln Lys Ser |     |     |
| 645   | 650 | 655 |
| Phe Ala Lys Ala Arg Asn Ile Ala Ile Cys Ile Glu Phe Lys Asp Ser |     |     |
| 660   | 665 | 670 |
| Asp Glu Glu Asp Ser Gln Pro Leu Lys Cys Ile Tyr Gly Arg Pro Gly |     |     |
| 675   | 680 | 685 |
| Gly Pro Val Phe Thr Arg Ser Ala Phe Ala Ala Val Leu His His His |     |     |
| 690   | 695 | 700 |
| Gln Asn Pro Glu Phe Tyr Asp Glu Ile Lys Ile Glu Leu Pro Thr Gln |     |     |
| 705   | 710 | 715 |
| Leu His Glu Lys His His Leu Leu Leu Thr Phe Phe His Val Ser Cys |     |     |
| 725   | 730 | 735 |
| Asp Asn Ser Ser Lys Gly Ser Thr Lys Lys Arg Asp Val Val Glu Thr |     |     |
| 740   | 745 | 750 |
| Gln Val Gly Tyr Ser Trp Leu Pro Leu Leu Lys Asp Gly Arg Val Val |     |     |
| 755   | 760 | 765 |
| Thr Ser Glu Gln His Ile Pro Val Ser Ala Asn Leu Pro Ser Gly Tyr |     |     |
| 770   | 775 | 780 |
| Leu Gly Tyr Gln Glu Leu Gly Met Gly Arg His Tyr Gly Pro Glu Ile |     |     |

|   |      |      |      |
|---|------|------|------|
| 785   | 790  | 795  | 800  |
| Lys Trp Val Asp Gly Gly Lys Pro Leu Leu Lys Ile Ser Thr His Leu |      |      |      |
| 805   | 810  | 815  |      |
| Val Ser Thr Val Tyr Thr Gln Asp Gln His Leu His Asn Phe Phe Gln |      |      |      |
| 820   | 825  | 830  |      |
| Tyr Cys Gln Lys Thr Glu Ser Gly Ala Gln Ala Leu Gly Asn Glu Leu |      |      |      |
| 835   | 840  | 845  |      |
| Val Lys Tyr Leu Lys Ser Leu His Ala Met Glu Gly His Val Met Ile |      |      |      |
| 850   | 855  | 860  |      |
| Ala Phe Leu Pro Thr Ile Leu Asn Gln Leu Phe Arg Val Leu Thr Arg |      |      |      |
| 865   | 870  | 875  | 880  |
| Ala Thr Gln Glu Glu Val Ala Val Asn Val Thr Arg Val Ile Ile His |      |      |      |
| 885   | 890  | 895  |      |
| Val Val Ala Gln Cys His Glu Glu Gly Leu Glu Ser His Leu Arg Ser |      |      |      |
| 900   | 905  | 910  |      |
| Tyr Val Lys Tyr Ala Tyr Lys Ala Glu Pro Tyr Val Ala Ser Glu Tyr |      |      |      |
| 915   | 920  | 925  |      |
| Lys Thr Val His Glu Glu Leu Thr Lys Ser Met Thr Thr Ile Leu Lys |      |      |      |
| 930   | 935  | 940  |      |
| Pro Ser Ala Asp Phe Leu Thr Ser Asn Lys Leu Leu Lys Tyr Ser Trp |      |      |      |
| 945   | 950  | 955  | 960  |
| Phe Phe Phe Asp Val Leu Ile Lys Ser Met Ala Gln His Leu Ile Glu |      |      |      |
| 965   | 970  | 975  |      |
| Asn Ser Lys Val Lys Leu Leu Arg Asn Gln Arg Phe Pro Ala Ser Tyr |      |      |      |
| 980   | 985  | 990  |      |
| His His Ala Val Glu Thr Val Val Asn Met Leu Met Pro His Ile Thr |      |      |      |
| 995   | 1000 | 1005 |      |
| Gln Lys Phe Arg Asp Asn Pro Glu Ala Ser Lys Asn Ala Asn His Ser |      |      |      |
| 1010  | 1015 | 1020 |      |
| Leu Ala Val Phe Ile Lys Arg Cys Phe Thr Phe Met Asp Arg Gly Phe |      |      |      |
| 1025  | 1030 | 1035 | 1040 |
| Val Phe Lys Gln Ile Asn Asn Tyr Ile Ser Cys Phe Ala Pro Gly Asp |      |      |      |
| 1045  | 1050 | 1055 |      |
| Pro Lys Thr Leu Phe Glu Tyr Lys Phe Glu Phe Leu Arg Val Val Cys |      |      |      |
| 1060  | 1065 | 1070 |      |
| Asn His Glu His Tyr Ile Pro Leu Asn Leu Pro Met Pro Phe Gly Lys |      |      |      |

| 1075 |     |     |     |     | 1080 |     |     |     |     | 1085 |     |     |     |     |      |
|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|
| Gly  | Arg | Ile | Gln | Arg | Tyr  | Gln | Asp | Leu | Gln | Leu  | Asp | Tyr | Ser | Leu | Thr  |
| 1090 |     |     |     |     | 1095 |     |     |     |     | 1100 |     |     |     |     |      |
| Asp  | Glu | Phe | Cys | Arg | Asn  | His | Phe | Leu | Val | Gly  | Leu | Leu | Leu | Arg | Glu  |
| 1105 |     |     |     |     | 1110 |     |     |     |     | 1115 |     |     |     |     | 1120 |
| Val  | Gly | Thr | Ala | Leu | Gln  | Glu | Phe | Arg | Glu | Val  | Arg | Leu | Ile | Ala | Ile  |
| 1125 |     |     |     |     | 1130 |     |     |     |     | 1135 |     |     |     |     |      |
| Ser  | Val | Leu | Lys | Asn | Leu  | Leu | Ile | Lys | His | Ser  | Phe | Asp | Asp | Arg | Tyr  |
| 1140 |     |     |     |     | 1145 |     |     |     |     | 1150 |     |     |     |     |      |
| Ala  | Ser | Arg | Ser | His | Gln  | Ala | Arg | Ile | Ala | Thr  | Leu | Tyr | Leu | Pro | Leu  |
| 1155 |     |     |     |     | 1160 |     |     |     |     | 1165 |     |     |     |     |      |
| Phe  | Gly | Leu | Leu | Ile | Glu  | Asn | Val | Gln | Arg | Ile  | Asn | Val | Arg | Asp | Val  |
| 1170 |     |     |     |     | 1175 |     |     |     |     | 1180 |     |     |     |     |      |
| Ser  | Pro | Phe | Pro | Val | Asn  | Ala | Gly | Met | Thr | Val  | Lys | Asp | Glu | Ser | Leu  |
| 1185 |     |     |     |     | 1190 |     |     |     |     | 1195 |     |     |     |     | 1200 |
| Ala  | Leu | Pro | Ala | Val | Asn  | Pro | Leu | Val | Thr | Pro  | Gln | Lys | Gly | Ser | Thr  |
| 1205 |     |     |     |     | 1210 |     |     |     |     | 1215 |     |     |     |     |      |
| Leu  | Asp | Asn | Ser | Leu | His  | Lys | Asp | Leu | Leu | Gly  | Ala | Ile | Ser | Gly | Ile  |
| 1220 |     |     |     |     | 1225 |     |     |     |     | 1230 |     |     |     |     |      |
| Gly  | Asn | Ala | Pro | Cys | Ser  | Cys | Gly | Leu | Leu | Ser  | Thr | Ile | Thr | Leu | Lys  |
| 1235 |     |     |     |     | 1240 |     |     |     |     | 1245 |     |     |     |     |      |
| Val  | Ser | Trp | Ser | Gln |      |     |     |     |     |      |     |     |     |     |      |
| 1250 |     |     |     |     |      |     |     |     |     |      |     |     |     |     |      |

<210> 4343

&lt;211&gt; 104

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4343

Met Cys His His Ala Trp Leu Ser Phe Val Phe Leu Val Glu Thr Gly  
1 5 10 15  
Phe His His Ile Gly Gln Ala Gly Leu Glu Leu Leu Thr Ser Ser Asp  
20 25 30  
Pro Pro Thr Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly Met Ser His

35                      40                      45  
 His Thr Arg Leu Ser Asn Thr Ile Leu Ser Arg Ser Gly Glu Arg Gly  
 50                      55                      60  
 His Pro Cys Leu Val Pro Val Phe Lys Gly Asn Ala Ser Ser Phe Cys  
 65                      70                      75                      80  
 Pro Phe Ser Ile Ile Leu Ala Val Phe Val Ile Asn Ser Ser Tyr Tyr  
 85                      90                      95  
 Phe Glu Ile His Ser Ile Ser Thr  
 100

<210> 4344

<211> 772

<212> PRT

<213> Homo sapiens

<400> 4344

Met Asp Thr Glu Phe Gly Ala Ser Ser Phe Phe His Ser Pro Ala Ser  
 1                      5                      10                      15  
 Cys His Glu Ser His Ser Ser Leu Ser Pro Glu Ser Ser Ala Pro Gln  
 20                      25                      30  
 His Ser Ser Pro Ser Arg Ser Ala Leu Lys Leu Leu Thr Ser Val Glu  
 35                      40                      45  
 Val Asp Asn Ile Glu Pro Ser Ala Phe His Arg Gln Gly Leu Pro Lys  
 50                      55                      60  
 Ala Pro Gly Trp Thr Glu Lys Asn Ser His His Ser Trp Glu Pro Leu  
 65                      70                      75                      80  
 Asp Ala Pro Glu Gly Lys Leu Gln Gly Ser Arg Cys Asp Asn Ser Ser  
 85                      90                      95  
 Cys Ser Lys Leu Pro Pro Gln Glu Gly Arg Gly Ile Ala Gln Glu Gln  
 100                      105                      110  
 Leu Phe Gln Glu Lys Lys Asp Pro Ala Asn Pro Ser Pro Val Met Pro  
 115                      120                      125  
 Gly Ile Ala Thr Ser Glu Arg Gly Asp Glu His Ser Leu Gly Cys Ser  
 130                      135                      140  
 Pro Ser Asn Ser Ser Ala Gln Pro Ser Leu Pro Leu Tyr Arg Thr Cys

|   |     |     |     |
|---|-----|-----|-----|
| 145   | 150 | 155 | 160 |
| His Pro Ile Met Pro Val Ala Ser Ser Phe Val Leu His Cys Pro Asp |     |     |     |
| 165   | 170 | 175 |     |
| Pro Val Gln Lys Thr Asn Gln Cys Leu Gln Gly Gln Ser Leu Lys Thr |     |     |     |
| 180   | 185 | 190 |     |
| Ser Leu Thr Leu Lys Val Asp Arg Gly Ser Glu Glu Thr Tyr Arg Pro |     |     |     |
| 195   | 200 | 205 |     |
| Glu Phe Pro Ser Thr Lys Gly Leu Val Arg Ser Leu Ala Glu Gln Phe |     |     |     |
| 210   | 215 | 220 |     |
| Gln Arg Met Gln Gly Val Ser Met Arg Asp Ser Thr Gly Phe Lys Asp |     |     |     |
| 225   | 230 | 235 | 240 |
| Arg Ser Leu Ser Gly Ser Leu Arg Lys Asn Ser Ser Pro Ser Asp Ser |     |     |     |
| 245   | 250 | 255 |     |
| Lys Pro Pro Phe Ser Gln Gly Gln Glu Lys Gly His Trp Pro Trp Ala |     |     |     |
| 260   | 265 | 270 |     |
| Lys Gln Gln Ser Ser Leu Glu Gly Gly Asp Arg Pro Leu Ser Trp Glu |     |     |     |
| 275   | 280 | 285 |     |
| Glu Ser Thr Glu His Ser Ser Leu Ala Leu Asn Ser Gly Leu Pro Asn |     |     |     |
| 290   | 295 | 300 |     |
| Gly Glu Thr Ser Ser Gly Gly Gln Pro Arg Leu Ala Glu Pro Asp Ile |     |     |     |
| 305   | 310 | 315 | 320 |
| Tyr Gln Glu Lys Leu Ser Gln Val Arg Asp Val Arg Ser Lys Asp Leu |     |     |     |
| 325   | 330 | 335 |     |
| Gly Ser Ser Thr Asp Leu Gly Thr Ser Leu Pro Leu Asp Ser Trp Val |     |     |     |
| 340   | 345 | 350 |     |
| Asn Ile Thr Arg Phe Cys Asp Ser Gln Leu Lys His Gly Ala Pro Arg |     |     |     |
| 355   | 360 | 365 |     |
| Pro Gly Met Lys Ser Ser Pro His Asp Ser His Thr Cys Val Thr Tyr |     |     |     |
| 370   | 375 | 380 |     |
| Pro Glu Arg Asn His Ile Leu Leu His Pro His Trp Asn Gln Asp Thr |     |     |     |
| 385   | 390 | 395 | 400 |
| Glu Gln Glu Thr Ser Glu Leu Glu Ser Leu Tyr Gln Ala Ser Leu Gln |     |     |     |
| 405   | 410 | 415 |     |
| Ala Ser Gln Ala Gly Cys Ser Gly Trp Gly Gln Gln Asp Thr Ala Trp |     |     |     |
| 420   | 425 | 430 |     |
| His Pro Leu Ser Gln Thr Gly Ser Ala Asp Gly Met Gly Arg Arg Leu |     |     |     |



|   |     |     |
|---|-----|-----|
| 435   | 440 | 445 |
| His Ser Ala His Asp Pro Gly Leu Ser Lys Thr Ser Thr Ala Glu Met |     |     |
| 450   | 455 | 460 |
| Glu His Gly Leu His Glu Ala Arg Thr Val Arg Thr Ser Gln Ala Thr |     |     |
| 465   | 470 | 475 |
| Pro Cys Arg Gly Leu Ser Arg Glu Cys Gly Glu Asp Glu Gln Tyr Ser |     |     |
|   | 485 | 490 |
| Ala Glu Asn Leu Arg Arg Ile Ser Arg Ser Leu Ser Gly Thr Val Val |     |     |
|   | 500 | 510 |
| Pro Glu Arg Glu Glu Ala Pro Val Ser Ser His Ser Phe Asp Ser Ser |     |     |
|   | 515 | 520 |
| Asn Val Arg Lys Pro Leu Glu Thr Gly His Arg Cys Ser Ser Ser Ser |     |     |
|   | 530 | 540 |
| Ser Leu Pro Val Ile His Asp Pro Ser Val Phe Leu Leu Gly Pro Gln |     |     |
| 545   | 550 | 555 |
| Leu Tyr Leu Pro Gln Pro Gln Phe Leu Ser Pro Asp Val Leu Met Pro |     |     |
|   | 565 | 570 |
| Thr Met Ala Gly Glu Pro Asn Arg Leu Pro Gly Thr Ser Arg Ser Val |     |     |
|   | 580 | 585 |
| Gln Gln Phe Leu Ala Met Cys Asp Arg Gly Glu Thr Ser Gln Gly Ala |     |     |
|   | 595 | 600 |
| Lys Tyr Thr Gly Arg Thr Leu Asn Tyr Gln Ser Leu Pro His Arg Ser |     |     |
| 610   | 615 | 620 |
| Arg Thr Asp Asn Ser Trp Ala Pro Trp Ser Glu Thr Asn Gln His Ile |     |     |
| 625   | 630 | 635 |
| Gly Thr Arg Phe Leu Thr Thr Pro Gly Cys Asn Pro Gln Leu Thr Tyr |     |     |
|   | 645 | 650 |
| Thr Ala Thr Leu Pro Glu Arg Ser Lys Gly Leu Gln Val Pro His Thr |     |     |
|   | 660 | 670 |
| Gln Ser Trp Ser Asp Leu Phe His Ser Pro Ser His Pro Pro Ile Val |     |     |
|   | 675 | 680 |
| His Pro Val Tyr Pro Pro Ser Ser Ser Leu His Val Pro Leu Arg Ser |     |     |
|   | 690 | 700 |
| Ala Trp Asn Ser Asp Pro Val Pro Gly Ser Arg Thr Pro Gly Pro Arg |     |     |
| 705   | 710 | 715 |
|   |     | 720 |

Arg Val Asp Met Pro Pro Asp Asp Asp Trp Arg Gln Ser Ser Tyr Ala  
                             725                            730                            735  
 Ser His Ser Gly His Arg Arg Thr Val Gly Glu Gly Phe Leu Phe Val  
                             740                            745                            750  
 Leu Ser Asp Ala Pro Arg Arg Glu Gln Ile Arg Ala Arg Val Leu Gln  
                             755                            760                            765  
 His Ser Gln Trp  
                             770

<210> 4345

<211> 235

<212> PRT

<213> Homo sapiens

<400> 4345

Met Asp Leu Ser Leu His Val Ala Ser Leu Cys Leu Pro His His Pro  
       1                            5                            10                            15  
 Ser Pro Ala Gln Leu Lys Pro Ala Gly Ala Leu Cys Arg Gln Ala Met  
                             20                            25                            30  
 Gly Asp Cys Asp Leu Pro Glu Phe Cys Thr Gly Thr Ser Ser His Cys  
                             35                            40                            45  
 Pro Pro Asp Val Tyr Leu Leu Asp Gly Ser Pro Cys Ala Arg Gly Ser  
                             50                            55                            60  
 Gly Tyr Cys Trp Asp Gly Ala Cys Pro Thr Leu Glu Gln Gln Cys Gln  
       65                            70                            75                            80  
 Gln Leu Trp Gly Pro Gly Glu Arg Thr Arg Ala Pro Leu His Pro Ala  
                             85                            90                            95  
 Pro His Pro Leu Val Gly Pro Val Phe Tyr Cys Gly Glu Asp Gly Gln  
                             100                            105                            110  
 Gly Lys Leu Arg Pro Ala Glu Arg Ser Pro Ser Pro Ser Cys Pro Gln  
                             115                            120                            125  
 Pro Gly Pro Cys Phe Leu Arg Leu Pro Pro Ser Ser Arg Gly Leu Phe  
                             130                            135                            140  
 Pro Gly Gly Glu Leu Cys Gly Arg Cys Ser Trp Lys Leu Arg Pro Gly

145                      150                      155                      160  
 Gln Arg Gly Pro Leu Pro Ala Leu Cys Arg Glu Gly Cys Pro Val Trp  
                          165                      170                      175  
 Glu Ala Ala Val Pro Gly Trp Lys Ala Gln Pro Ala Arg Thr Ala His  
                          180                      185                      190  
 Gly Ala Ser Gly Leu Tyr Arg Ser Pro Arg Trp Pro Gly Ser Asp Leu  
                          195                      200                      205  
 Ser Gly Ser Leu Gly Thr Pro Gln Cys Pro Ala Gly Pro Ala Trp Pro  
                          210                      215                      220  
 Gly Pro Gly Arg Ala Arg His Pro Val Trp Thr  
 225                      230                      235

<210> 4346

<211> 125

<212> PRT

<213> Homo sapiens

<400> 4346

Met Gly Lys Arg Glu Gln Val Gly Arg Arg Ser Gly Ala Trp Ala Glu  
   1                      5                      10                      15  
 Ala Ala Met Leu Cys Phe Leu Leu Gln Val Glu Ala Ser Gly Val Tyr  
                          20                      25                      30  
 Ala Ala Ser Lys Glu Gly Gly His Gly Arg Gly Val Leu Ser His Ala  
                          35                      40                      45  
 Ala Arg Ala Gly Arg Pro Trp Glu Ala Ala His Phe Phe Leu Gly Pro  
                          50                      55                      60  
 Asp Ala Trp Ser Val Thr Thr Gly Arg Ala Gly Leu Thr Glu Ala Pro  
                          65                      70                      75                      80  
 Ala Pro Ala Ala Pro Tyr Leu Pro Gly Met Ala Arg Glu Ser Arg Pro  
                          85                      90                      95  
 Glu Gly Gly Ser Ser Arg Leu Leu Glu Gln Glu Arg Ala Gly Ser Gly  
                          100                      105                      110  
 Asp Arg Cys Val Pro Ala Ala Gln Arg Ser Gly Gln Gly  
                          115                      120                      125

&lt;210&gt; 4347

&lt;211&gt; 170

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4347

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Met Ala Thr Ala Thr Asn Glu Leu Gly Gln Ala Thr Cys Ala Ala Ser
  1             5             10             15
Leu Thr Val Arg Pro Gly Gly Ser Thr Ser Pro Phe Ser Ser Pro Ile
      20             25             30
Thr Ser Asp Glu Glu Tyr Leu Ser Pro Pro Glu Glu Phe Pro Glu Pro
      35             40             45
Gly Glu Thr Trp Pro Arg Thr Pro Thr Met Lys Pro Ser Pro Ser Gln
      50             55             60
Asn Arg Arg Ser Ser Asp Thr Gly Ser Lys Ala Pro Pro Thr Phe Lys
      65             70             75             80
Val Ser Leu Met Asp Gln Ser Val Arg Glu Gly Gln Asp Val Ile Met
      85             90             95
Ser Ile Arg Val Gln Gly Glu Pro Lys Pro Val Val Ser Trp Leu Arg
      100            105            110
Asn Arg Gln Pro Val Arg Pro Asp Gln Arg Arg Phe Ala Glu Glu Ala
      115            120            125
Glu Gly Gly Leu Cys Arg Leu Arg Ile Leu Ala Ala Glu Arg Gly Asp
      130            135            140
Ala Gly Phe Tyr Thr Cys Lys Ala Val Asn Glu Tyr Gly Ala Arg Gln
      145            150            155            160
Cys Glu Ala Arg Leu Glu Val Arg Gly Glu
      165            170

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&lt;210&gt; 4348

&lt;211&gt; 314

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4348

Met Ile Leu Ala His Cys Ser Leu Asp Phe Leu Gly Ser Ser Asp Pro  
 1 5 10 15  
 Pro Gln Pro Pro Met Trp Leu Glu Pro Gln Ala Arg Ala Thr Met Pro  
 20 25 30  
 Gly Tyr Phe Phe Val Glu Leu Gly Ser Arg Phe Val Ala Gln Ala Gly  
 35 40 45  
 Leu Glu Leu Leu Gly Ser Ser Asn Pro Ser His Ser Ala Ser Arg Ser  
 50 55 60  
 Val Glu Asn Ile Gly Val Gly Tyr Tyr Thr Cys Phe Ser Arg Phe Tyr  
 65 70 75 80  
 Lys Thr Ala Asp Leu Cys Val Glu Asp Arg Pro Gly Val Cys Ser Leu  
 85 90 95  
 Arg Cys Glu Asp Val Leu Ser Arg Asp Phe Pro Trp Val Ser Ile Ser  
 100 105 110  
 Phe Phe Leu Leu Ser Ser Lys Thr Asn Arg Arg Pro Ala Ala Val Ala  
 115 120 125  
 Gln Ala Ser Ser Pro Ser Thr Leu Gly Gly Cys Arg Trp Arg Ile Thr  
 130 135 140  
 Arg Pro Gly Val Arg Asp Gln Pro Gly Arg His Asp Glu Ala Leu Ser  
 145 150 155 160  
 Leu Pro Lys Met Gln Lys Leu Ala Gly Cys Asp Gly Gly Cys Leu Trp  
 165 170 175  
 Ser Gln Leu Leu Gly Arg Leu Arg Gln Glu Asn Cys Leu Asp Pro Gly  
 180 185 190  
 Gly Gly Gly Cys Ser Glu Pro Gly Ser Cys His Cys Thr Pro Ala Trp  
 195 200 205  
 Ala Thr Gly Arg Asp Ser Val Ser Lys Thr Asn Thr Ile Arg Lys Cys  
 210 215 220  
 Ser Gly Gly Gly Gly Glu Leu Leu Ile Cys Glu Asp Arg Leu Lys Ala  
 225 230 235 240  
 Thr Pro Arg Val Ala Leu Ser Thr Ser Pro Ser Arg Ile Trp Leu Pro  
 245 250 255  
 Ala Ser Leu Lys Ile Val Val Trp His Lys Glu Arg Cys Arg Arg Leu  
 260 265 270  
 Val Leu Ser Thr Leu Glu Phe Pro Ala Ala Gln His Leu Val Pro Ser

275                      280                      285  
 Pro Pro Pro Ser Gln Gly Ala Ala Ile Leu Phe Gly Phe Ser Val Cys  
 290                      295                      300  
 Gly Pro Glu Thr Asn Val Phe Pro Lys Asp  
 305                      310

<210> 4349

<211> 413

<212> PRT

<213> Homo sapiens

<400> 4349

Met Ser Leu Thr Thr Asp Asp Leu Leu Arg Leu Pro Ala Asp Gly Ser  
 1                      5                      10                      15  
 Phe Ser Tyr Thr Tyr Val Gly Pro Ser His Arg Thr Ser Lys Lys Asn  
 20                      25                      30  
 Lys Lys Cys Arg Gly Arg Leu Gly Ser Leu Asp Ile Glu Lys Asn Pro  
 35                      40                      45  
 His Phe Gln Gly Pro Tyr Thr Ser Met Gly Lys Asp Asn Phe Val Thr  
 50                      55                      60  
 Pro Val Ile Arg Ser Asn Ile Asn Gly Lys Gln Cys Gly Arg Leu Lys  
 65                      70                      75                      80  
 Asn Pro Lys Leu Met Asn Arg Thr Asn Asn Cys Ile Ser Glu Ser Ser  
 85                      90                      95  
 Leu Ser Phe Pro Lys Lys Ser Ser Phe Lys Asp Ser Ser Glu His Ser  
 100                      105                      110  
 Leu Glu Lys Asn Tyr Pro Arg Trp Leu Thr Ser Gln Lys Ser Asp Leu  
 115                      120                      125  
 Asn Val Ser Gly Ile Thr Ser Ile Pro Asp Phe Lys Tyr Pro Val Trp  
 130                      135                      140  
 Leu His Asn Gln Asp Leu Leu Pro Asp Ala Asn Ser Gln Arg Val Tyr  
 145                      150                      155                      160  
 Gln Ile Phe Lys Asp Asp Gln Cys Ser Pro Arg His Ser His Gln Ala  
 165                      170                      175  
 Gln Gly Thr Ser Arg Leu Ile Asn Lys Leu Asp Cys Phe Glu Tyr Ala

|   |     |     |     |
|---|-----|-----|-----|
| 180   | 185 | 190 |     |
| Phe Glu Pro Ser Asn Phe Ser Asn Ser Leu Ser Asp Asp Lys Glu Leu |     |     |     |
| 195   | 200 | 205 |     |
| Val Asn Glu Tyr Lys Cys Asp Phe Glu His Ser Gln Cys Gln Cys Glu |     |     |     |
| 210   | 215 | 220 |     |
| Asn Pro Leu Leu Pro Gly Gln Ser Thr Lys Pro Phe Ser Gly Asp Lys |     |     |     |
| 225   | 230 | 235 | 240 |
| Ile Glu Leu Leu Ile Leu Lys Ala Lys Arg Asn Leu Glu Gln Cys Thr |     |     |     |
| 245   | 250 | 255 |     |
| Glu Glu Leu Pro Lys Ser Met Lys Lys Asp Asp Ser Pro Cys Ser Leu |     |     |     |
| 260   | 265 | 270 |     |
| Asp Lys Leu Glu Ala Asp Arg Ser Trp Glu Asn Ile Pro Val Thr Phe |     |     |     |
| 275   | 280 | 285 |     |
| Lys Ser Pro Val Pro Val Asn Ser Asp Asp Ser Pro Gln Gln Thr Ser |     |     |     |
| 290   | 295 | 300 |     |
| Arg Ala Lys Ser Ala Lys Gly Val Leu Glu Asp Phe Leu Asn Asn Asp |     |     |     |
| 305   | 310 | 315 | 320 |
| Asn Gln Ser Cys Thr Leu Ser Gly Gly Lys His His Gly Pro Val Glu |     |     |     |
| 325   | 330 | 335 |     |
| Ala Leu Lys Gln Met Leu Phe Asn Leu Gln Ala Val Gln Glu Arg Phe |     |     |     |
| 340   | 345 | 350 |     |
| Asn Gln Asn Lys Thr Thr Asp Pro Lys Glu Glu Ile Lys Gln Val Ser |     |     |     |
| 355   | 360 | 365 |     |
| Glu Asp Asp Phe Ser Lys Leu Gln Leu Lys Glu Ser Met Ile Pro Ile |     |     |     |
| 370   | 375 | 380 |     |
| Thr Arg Ser Leu Gln Lys Ala Leu His His Leu Ser Arg Leu Arg Asp |     |     |     |
| 385   | 390 | 395 | 400 |
| Leu Val Asp Asp Thr Asn Gly Glu Arg Ser Pro Lys Met             |     |     |     |
| 405   | 410 |     |     |

&lt;210&gt; 4350

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4350

Met Gly Gly Lys Leu Ser Asp Ser Arg Lys Asn Leu Cys Lys Gln Ser  
 1 5 10 15  
 Ser Gln Ser Asp Thr Phe Gly Asp Pro Arg Pro Ala Gly Val Lys Ile  
 20 25 30  
 Ser Val Asn Pro Leu Lys Cys Leu Leu Gly Val Gly His Thr Leu Pro  
 35 40 45  
 Gly Pro Leu Ala Cys Pro Ala Leu Ala Trp Pro Val Met Ser Gly Ile  
 50 55 60  
 Gln Gly Cys His Pro Leu Pro Lys Leu Ser Cys Gly Val Pro Gly Val  
 65 70 75 80  
 Ala Phe Pro Pro Thr Val Pro Arg Leu Pro Leu Leu Ser Val Ala Ala  
 85 90 95  
 Pro His Ser Gly Gly Ile Met Ser Ala Gly Glu Leu Ser Leu Pro Gln  
 100 105 110  
 His Ser Trp Pro Arg Leu Trp Ala Ser Ser Glu Ile Ala Val Thr Thr  
 115 120 125  
 Arg Pro Ala Met Asp Ser Leu  
 130 135

&lt;210&gt; 4351

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4351

Met Leu Pro Ser Phe Tyr Ser Glu Leu Phe Thr Leu Tyr Leu Leu Leu  
 1 5 10 15  
 His Glu Arg Glu Asp Ser Phe Tyr Ser Gln Gly Ile Ala Asn Leu Ser  
 20 25 30  
 Leu Phe Pro Asp Thr Gln Leu Leu Glu Phe Leu Asp Val Gln Lys His  
 35 40 45  
 Leu Trp Pro Leu Lys Asp Leu Thr Leu Thr Ser Asn Gln Arg Tyr Ser  
 50 55 60



Leu Val Arg Asp Lys Cys Phe Leu Ser Ala Thr Glu Cys Leu Gln Lys  
 65                      70                      75                      80  
 Ile Met Thr Thr Val Asp Pro Arg Glu Lys Leu Glu Val Leu Glu Arg  
                     85                      90                      95  
 Thr Tyr Gly Glu Ile Glu Gly Thr Val Ser Arg Val Leu Gly Arg Glu  
                     100                      105                      110  
 Tyr Lys Leu Pro Met Asp Asp Leu Leu Pro Leu Leu Ile Tyr Val Val  
                     115                      120                      125  
 Ser Arg Ala Arg Trp Gly Ser Gln Gly Pro Glu Lys Gly Gly Ser Gln  
                     130                      135                      140  
 Pro Gly Cys Trp Gly Ala Arg Gly Arg Val Arg Thr Thr Pro Gln Val  
 145                      150                      155                      160  
 Ser Ser His Pro Gly Gln Arg Ser Phe Pro Ser Cys Leu Ser Ala Thr  
                     165                      170                      175  
 Gly Leu Phe Ser Leu Ser Pro Ser Leu Ser Trp Trp Gly Gly Val Leu  
                     180                      185                      190  
 Gln Asn Ser Ala Pro Gly Ser Arg Asp Pro Pro Asp Pro  
                     195                      200                      205

<210> 4352

<211> 416

<212> PRT

<213> Homo sapiens

<400> 4352

Met Ser Pro Ala Met Leu Ser Val Leu Val Lys Met Met Leu Ala Gln  
 1                      5                      10                      15  
 Ala Gln Glu Ser Val Phe Glu Lys Ile Ser Leu Pro Gly Ile Arg Asn  
                     20                      25                      30  
 Glu Phe Phe Met Leu Val Lys Val Ala Gln Glu Ala Ala Lys Val Gly  
                     35                      40                      45  
 Glu Val Tyr Gln Gln Leu His Ala Ala Met Ser Gln Ala Pro Val Lys  
                     50                      55                      60  
 Glu Asn Ile Pro Tyr Ser Trp Ala Ser Leu Ala Cys Val Lys Ala His  
 65                      70                      75                      80

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Tyr | Ala | Ala | Leu | Ala | His | Tyr | Phe | Thr | Ala | Ile | Leu | Leu | Ile | Asp |
| 85  |     |     |     | 90  |     |     |     | 95  |     |     |     |     |     |     |     |
| His | Gln | Val | Lys | Pro | Gly | Thr | Asp | Leu | Asp | His | Gln | Glu | Lys | Cys | Leu |
| 100 |     |     |     | 105 |     |     |     | 110 |     |     |     |     |     |     |     |
| Ser | Gln | Leu | Tyr | Asp | His | Met | Pro | Glu | Gly | Leu | Thr | Pro | Leu | Ala | Thr |
| 115 |     |     |     | 120 |     |     |     | 125 |     |     |     |     |     |     |     |
| Leu | Lys | Asn | Asp | Gln | Gln | Arg | Arg | Gln | Leu | Gly | Lys | Ser | His | Leu | Arg |
| 130 |     |     |     | 135 |     |     |     | 140 |     |     |     |     |     |     |     |
| Arg | Ala | Met | Ala | His | His | Glu | Glu | Ser | Val | Arg | Glu | Ala | Ser | Leu | Cys |
| 145 |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |     |
| Lys | Lys | Leu | Arg | Ser | Ile | Glu | Val | Leu | Gln | Lys | Val | Leu | Cys | Ala | Ala |
| 165 |     |     |     | 170 |     |     |     | 175 |     |     |     |     |     |     |     |
| Gln | Glu | Arg | Ser | Arg | Leu | Thr | Tyr | Ala | Gln | His | Gln | Glu | Glu | Asp | Asp |
| 180 |     |     |     | 185 |     |     |     | 190 |     |     |     |     |     |     |     |
| Leu | Leu | Asn | Leu | Ile | Asp | Ala | Pro | Ser | Val | Val | Ala | Lys | Thr | Glu | Gln |
| 195 |     |     |     | 200 |     |     |     | 205 |     |     |     |     |     |     |     |
| Glu | Val | Asp | Ile | Ile | Leu | Pro | Gln | Phe | Ser | Lys | Leu | Thr | Val | Thr | Asp |
| 210 |     |     |     | 215 |     |     |     | 220 |     |     |     |     |     |     |     |
| Phe | Phe | Gln | Lys | Leu | Gly | Pro | Leu | Ser | Val | Phe | Ser | Ala | Asn | Lys | Arg |
| 225 |     |     |     | 230 |     |     |     | 235 |     |     |     | 240 |     |     |     |
| Trp | Thr | Pro | Pro | Arg | Ser | Ile | Arg | Phe | Thr | Ala | Glu | Glu | Gly | Asp | Leu |
| 245 |     |     |     | 250 |     |     |     | 255 |     |     |     |     |     |     |     |
| Gly | Phe | Thr | Leu | Arg | Gly | Asn | Ala | Pro | Val | Gln | Val | His | Phe | Leu | Asp |
| 260 |     |     |     | 265 |     |     |     | 270 |     |     |     |     |     |     |     |
| Pro | Tyr | Cys | Ser | Ala | Ser | Val | Ala | Gly | Ala | Arg | Glu | Gly | Asp | Tyr | Ile |
| 275 |     |     |     | 280 |     |     |     | 285 |     |     |     |     |     |     |     |
| Val | Ser | Ile | Gln | Leu | Val | Asp | Cys | Lys | Trp | Leu | Thr | Leu | Ser | Glu | Val |
| 290 |     |     |     | 295 |     |     |     | 300 |     |     |     |     |     |     |     |
| Met | Lys | Leu | Leu | Lys | Ser | Phe | Gly | Glu | Asp | Glu | Ile | Glu | Met | Lys | Val |
| 305 |     |     |     | 310 |     |     |     | 315 |     |     |     | 320 |     |     |     |
| Val | Ser | Leu | Leu | Asp | Ser | Thr | Ser | Ser | Met | His | Asn | Lys | Ser | Ala | Thr |
| 325 |     |     |     | 330 |     |     |     | 335 |     |     |     |     |     |     |     |
| Tyr | Ser | Val | Gly | Met | Gln | Lys | Thr | Tyr | Ser | Met | Ile | Cys | Leu | Ala | Ile |
| 340 |     |     |     | 345 |     |     |     | 350 |     |     |     |     |     |     |     |
| Asp | Asp | Asp | Asp | Lys | Thr | Asp | Lys | Thr | Lys | Lys | Ile | Ser | Lys | Lys | Leu |
| 355 |     |     |     | 360 |     |     |     | 365 |     |     |     |     |     |     |     |

Ser Phe Leu Ser Trp Gly Thr Asn Lys Asn Arg Gln Lys Ser Ala Ser  
 370 375 380  
 Thr Leu Cys Leu Pro Ser Val Gly Ala Ala Arg Pro Gln Val Lys Lys  
 385 390 395 400  
 Lys Leu Pro Ser Pro Phe Ser Leu Leu Asn Ser Asp Ser Ser Trp Tyr  
 405 410 415

<210> 4353

<211> 296

<212> PRT

<213> Homo sapiens

<400> 4353

Met Ser Ala Leu Ile Leu Pro Arg Met Lys Gly Pro Arg Leu Thr His  
 1 5 10 15  
 Pro Glu Ser Arg Ala His Gln Ala Leu Pro Gly His Ser Leu Ser Ser  
 20 25 30  
 Ser Ser His Ser Leu Arg Ser Ala Cys Ala Thr Gln Ile Gln Thr Ser  
 35 40 45  
 Arg Thr Trp Glu Val Glu Trp Leu Thr Arg Gly His Pro Leu Glu Glu  
 50 55 60  
 Ala Lys Ala Gly Leu Glu Pro Arg Pro Val Gly Val Gln Val Arg Pro  
 65 70 75 80  
 Leu Pro Ala Ala Gln Cys Pro Leu Ser Ser Ser Ser Leu Gly Thr Leu  
 85 90 95  
 Glu Pro Gln Trp Gly Val Gln Gly Ser Ala Gln Pro Phe Pro Arg Cys  
 100 105 110  
 Val Thr Pro Ser Thr Phe Leu Pro Leu Ser Val Pro Leu Gly Val Ala  
 115 120 125  
 Arg Glu Leu Gly Gly Val Ile Leu His His Glu His Pro Pro Phe Ser  
 130 135 140  
 Pro Ser Ala Glu Lys Ser Val Pro Leu Cys Ile Leu Tyr Glu Lys Tyr  
 145 150 155 160  
 Arg Asp Cys Leu Thr Glu Ser Asn Leu Ile Lys Val Arg Ala Leu Leu  
 165 170 175

Val Glu Pro Val Ile Asn Ser Tyr Leu Leu Ala Glu Arg Asp Leu Tyr  
                   180                                  185                                  190  
 Leu Glu Asn Pro Glu Ile Lys Ile Arg Ile Leu Gly Glu Pro Lys Gln  
                   195                                  200                                  205  
 Lys Arg Lys Leu Val Ala Glu Val Ser Leu Gln Asn Pro Leu Pro Val  
                   210                                  215                                  220  
 Ala Leu Glu Gly Cys Thr Phe Thr Val Glu Gly Ala Gly Leu Thr Glu  
 225                                  230                                  235                                  240  
 Glu Gln Lys Thr Val Glu Ile Pro Asp Pro Val Glu Ala Gly Glu Glu  
                                   245                                  250                                  255  
 Val Lys Val Arg Met Asp Leu Leu Pro Leu His Met Gly Leu His Lys  
                                   260                                  265                                  270  
 Leu Val Val Asn Phe Glu Ser Asp Lys Leu Lys Ala Val Lys Gly Phe  
                                   275                                  280                                  285  
 Arg Asn Val Ile Ile Gly Pro Ala  
                   290                                  295

<210> 4354

<211> 130

<212> PRT

<213> Homo sapiens

<400> 4354

Met Ser Ala Leu Ala Val Ser Met Ala Met Val Arg Gly Ser Leu Pro  
   1                                  5                                  10                                  15  
 Ser Glu Ser Arg Ala Pro Arg Ser Ala Pro Arg Phe Arg Asn Arg Gln  
                   20                                  25                                  30  
 Ala Ser Leu Glu Arg Arg Ala Arg Val Ser Arg Pro Pro Asn Phe Ser  
                   35                                  40                                  45  
 Gln Pro Ser Ser Pro Cys His His Pro Tyr Pro Val Trp Pro Arg Met  
                   50                                  55                                  60  
 Val Ala Trp Cys Ser Gly Pro Arg Pro Ala Leu Ser Ala Trp Phe Thr  
                   65                                  70                                  75                                  80  
 Phe Ala Pro Phe Trp Arg Arg Asn Ser Gln Ala Arg Arg Glu Phe Cys  
                                   85                                  90                                  95

Met Glu Lys Ser Arg Arg Gly Val Glu Gly Gly Ile Pro Ser Gly Gly  
                   100                  105                  110  
 Phe Gln Asp Val Leu Gly Trp Arg Gln Phe Arg Glu Trp Glu Gly Gly  
                   115                  120                  125  
 Val Trp  
           130

<210> 4355

<211> 213

<212> PRT

<213> Homo sapiens

<400> 4355

Met Glu Pro Ala Pro Val Ser Ala Pro Thr Arg Ser Pro Cys Ser Pro  
   1                  5                  10                  15  
 Ser Leu Trp Ser Pro Gln Asp Ala Glu Pro Asn Gly Gly Arg Ala Gly  
                   20                  25                  30  
 His Ala Gly Gly Arg Val Ala Leu Ala Ser Gln His Pro Ala Gln Arg  
                   35                  40                  45  
 Lys Pro Leu Leu Arg Gly Arg Pro His Arg Gly Ala Val Gly Pro Asp  
                   50                  55                  60  
 Gly Cys Ala Leu Leu Pro Gln Val Ser Pro Pro Ala Pro Ala Pro Ala  
                   65                  70                  75                  80  
 His Ser Ala Asp Ser Ala Pro Arg Ala Thr Gly Ser Ala Pro Trp Thr  
                   85                  90                  95  
 Ala Pro Ala Ala Pro Asn Pro Ala Gly Asp Leu Pro Gly Gly Ser Trp  
                   100                  105                  110  
 Ser Ser Pro Ser His Pro Asp Ala Ser Leu Arg Ser Asn Ser Arg Ala  
                   115                  120                  125  
 Asn Phe Gln Leu Gln Pro Leu Leu Pro Pro Ala Gly Gly Ala Ser His  
                   130                  135                  140  
 Arg Pro Pro Thr Pro Ser Ile Pro Ser Thr His Ser Pro Thr Pro Cys  
                   145                  150                  155                  160  
 Gly Ser Leu Gln Lys Arg Pro Gly Arg Leu Cys Pro Pro Ala Pro Pro  
                   165                  170                  175

Gly Leu Ser Pro Ser Arg Thr His Leu Ser Ser Arg Thr Leu Phe Pro  
                   180                  185                  190  
 Gly Gly Thr Leu Leu Thr Lys Pro Lys Asp Gln Thr Glu Arg Pro Phe  
                   195                  200                  205  
 Leu Pro Ser Pro Thr  
                   210

<210> 4356

<211> 333

<212> PRT

<213> Homo sapiens

<400> 4356

Met Lys Tyr Arg Ser Cys Ala Asp Cys Val Leu Ala Arg Asp Pro Tyr  
   1                  5                  10                  15  
 Cys Ala Trp Ser Val Asn Thr Ser Arg Cys Val Ala Val Gly Gly His  
                   20                  25                  30  
 Ser Gly Ser Leu Leu Ile Gln His Val Met Thr Ser Asp Thr Ser Gly  
                   35                  40                  45  
 Ile Cys Asn Leu Arg Gly Ser Lys Lys Val Arg Pro Thr Pro Lys Asn  
                   50                  55                  60  
 Ile Thr Val Val Ala Gly Thr Asp Leu Val Leu Pro Cys His Leu Ser  
   65                  70                  75                  80  
 Ser Asn Leu Ala His Ala Arg Trp Thr Phe Gly Gly Arg Asp Leu Pro  
                   85                  90                  95  
 Ala Glu Gln Pro Gly Ser Phe Leu Tyr Asp Ala Arg Leu Gln Ala Leu  
                   100                  105                  110  
 Val Val Met Ala Ala Gln Pro Arg His Ala Gly Ala Tyr His Cys Phe  
                   115                  120                  125  
 Ser Glu Glu Gln Gly Ala Arg Leu Ala Ala Glu Gly Tyr Leu Val Ala  
                   130                  135                  140  
 Val Val Ala Gly Pro Ser Val Thr Leu Glu Ala Arg Ala Pro Leu Glu  
   145                  150                  155                  160  
 Asn Leu Gly Leu Val Trp Leu Ala Val Val Ala Leu Gly Ala Val Cys  
                   165                  170                  175

Leu Val Leu Leu Leu Leu Val Leu Ser Leu Arg Arg Arg Leu Arg Glu  
                   180                  185                  190  
 Glu Leu Glu Lys Gly Ala Lys Ala Thr Glu Arg Thr Leu Val Tyr Pro  
                   195                  200                  205  
 Leu Glu Leu Pro Lys Glu Pro Thr Ser Pro Pro Phe Arg Pro Cys Pro  
                   210                  215                  220  
 Glu Pro Asp Glu Lys Leu Trp Asp Pro Val Gly Tyr Tyr Tyr Ser Asp  
 225                  230                  235                  240  
 Gly Ser Leu Lys Ile Val Pro Gly His Ala Arg Cys Gln Pro Gly Gly  
                   245                  250                  255  
 Gly Pro Pro Ser Pro Pro Pro Gly Ile Pro Gly Gln Pro Leu Pro Ser  
                   260                  265                  270  
 Pro Thr Arg Leu His Leu Gly Gly Gly Arg Asn Ser Asn Ala Asn Gly  
                   275                  280                  285  
 Tyr Val Arg Leu Gln Leu Gly Gly Glu Asp Arg Gly Gly Leu Gly His  
                   290                  295                  300  
 Pro Leu Pro Glu Leu Ala Asp Glu Leu Arg Arg Lys Leu Gln Gln Arg  
 305                  310                  315                  320  
 Gln Pro Leu Pro Asp Ser Asn Pro Glu Glu Ser Ser Val  
                   325                  330

<210> 4357

<211> 180

<212> PRT

<213> Homo sapiens

<400> 4357

Met Leu Glu Gly Val Ser Asn Glu Phe Asp His Phe Gly Ile Ser Leu  
   1                  5                  10                  15  
 Pro Leu Lys Ile Cys Leu His Leu Gly Trp Asp Glu Gly Leu Val Glu  
                   20                  25                  30  
 Gly Lys Val Val Arg Leu Gly Gln Gly Ile Gly Lys Ser Ile Cys Ser  
                   35                  40                  45  
 Ser Cys Gln Leu Phe Glu Glu Ala Pro Thr Gln Met Ser Thr Val Pro  
                   50                  55                  60

Ser Gly Leu Pro Leu Pro Ile Leu Met His Leu Cys Leu Leu Pro Val  
 65                                70                                75                                80  
 Cys Met Ala His Leu Cys Pro Ala Ser Pro Cys Tyr Phe Gly Ala Thr  
                                  85                                90                                95  
 Pro Gly Ser Gly Lys Phe Cys Arg Leu Ile Thr Tyr Ser His Ser Ser  
                                  100                                105                                110  
 Pro Gln Leu Ala Ala Ser Leu Arg His Arg Gly Arg Glu Val Gly Lys  
                                  115                                120                                125  
 Asp Leu Pro Tyr Pro Gly Leu Cys Pro Leu Thr Phe His Pro Ser Phe  
                                  130                                135                                140  
 Phe Pro Pro Val Glu Gly Cys Val Ser Ser Leu Pro Gly Lys Leu Leu  
 145                                150                                155                                160  
 Ser Pro Gln Thr Ile Phe Phe Gln Ile Leu Trp Leu Tyr Ser Lys Ser  
                                  165                                170                                175  
 Ser Leu Val Leu  
                                  180

<210> 4358

<211> 1222

<212> PRT

<213> Homo sapiens

<400> 4358

Met Leu Asp Pro Ser Ser Ser Glu Glu Glu Ser Asp Glu Gly Leu Glu  
 1                                5                                10                                15  
 Glu Glu Ser Arg Asp Val Leu Val Ala Ala Gly Ser Ser Gln Arg Ala  
                                  20                                25                                30  
 Pro Pro Ala Pro Thr Arg Glu Gly Gln Leu Asp Asp Glu Gln Glu Arg  
                                  35                                40                                45  
 Arg Ile Arg Leu Gln Leu Tyr Val Phe Val Val Arg Cys Ile Ala Tyr  
                                  50                                55                                60  
 Pro Phe Asn Ala Lys Gln Pro Thr Asp Met Ala Arg Arg Gln Gln Lys  
 65                                70                                75                                80  
 Leu Asn Lys Gln Gln Leu Gln Leu Leu Lys Glu Arg Phe Gln Ala Phe  
                                  85                                90                                95



|                                 |                                 |
|---------------------------------|---------------------------------|
| Leu Asn Gly Glu Thr Gln Ile Val | Ala Asp Glu Ala Phe Cys Asn Ala |
| 100                             | 105 110                         |
| Val Arg Ser Tyr Tyr Glu Val Phe | Leu Lys Ser Asp Arg Val Ala Arg |
| 115                             | 120 125                         |
| Met Val Gln Ser Gly Gly Cys Ser | Ala Asn Asp Phe Arg Glu Val Phe |
| 130                             | 135 140                         |
| Lys Lys Asn Ile Glu Lys Arg Val | Arg Ser Leu Pro Glu Ile Asp Gly |
| 145                             | 150 155 160                     |
| Leu Ser Lys Glu Thr Val Leu Ser | Ser Trp Ile Ala Lys Tyr Asp Ala |
| 165                             | 170 175                         |
| Ile Tyr Arg Gly Glu Glu Asp Leu | Cys Lys Gln Pro Asn Arg Met Ala |
| 180                             | 185 190                         |
| Leu Ser Ala Val Ser Glu Leu Ile | Leu Ser Lys Glu Gln Leu Tyr Glu |
| 195                             | 200 205                         |
| Met Phe Gln Gln Ile Leu Gly Ile | Lys Lys Leu Glu His Gln Leu Leu |
| 210                             | 215 220                         |
| Tyr Asn Ala Cys Gln Leu Asp Asn | Ala Asp Glu Gln Ala Ala Gln Ile |
| 225                             | 230 235 240                     |
| Arg Arg Glu Leu Asp Gly Arg Leu | Gln Leu Ala Asp Lys Met Ala Lys |
| 245                             | 250 255                         |
| Glu Arg Lys Phe Pro Lys Phe Ile | Ala Lys Asp Met Glu Asn Met Tyr |
| 260                             | 265 270                         |
| Ile Glu Glu Leu Arg Ser Ser Val | Asn Leu Leu Met Ala Asn Leu Glu |
| 275                             | 280 285                         |
| Ser Leu Pro Val Ser Lys Gly Gly | Pro Glu Phe Lys Leu Gln Lys Leu |
| 290                             | 295 300                         |
| Lys Arg Ser Gln Asn Ser Ala Phe | Leu Asp Ile Gly Asp Glu Asn Glu |
| 305                             | 310 315 320                     |
| Ile Gln Leu Ser Lys Ser Asp Val | Val Leu Ser Phe Thr Leu Glu Ile |
| 325                             | 330 335                         |
| Val Ile Met Glu Val Gln Gly Leu | Lys Ser Val Ala Pro Asn Arg Ile |
| 340                             | 345 350                         |
| Val Tyr Cys Thr Met Glu Val Glu | Gly Glu Lys Leu Gln Thr Asp Gln |
| 355                             | 360 365                         |
| Ala Glu Ala Ser Arg Pro Gln Trp | Gly Thr Gln Gly Asp Phe Thr Thr |
| 370                             | 375 380                         |

Thr His Pro Arg Pro Val Val Lys Val Lys Leu Phe Thr Glu Ser Thr  
 385 390 395 400  
 Gly Val Leu Ala Leu Glu Asp Lys Glu Leu Gly Arg Val Ile Leu Tyr  
 405 410 415  
 Pro Thr Ser Asn Ser Ser Lys Ser Ala Glu Leu His Arg Met Val Val  
 420 425 430  
 Pro Lys Asn Ser Gln Asp Ser Asp Leu Lys Ile Lys Leu Ala Val Arg  
 435 440 445  
 Met Asp Lys Pro Ala His Met Lys His Ser Gly Tyr Leu Tyr Ala Leu  
 450 455 460  
 Gly Gln Lys Val Trp Lys Arg Trp Lys Lys Arg Tyr Phe Val Leu Val  
 465 470 475 480  
 Gln Val Ser Gln Tyr Thr Phe Ala Met Cys Ser Tyr Arg Glu Lys Lys  
 485 490 495  
 Ser Glu Pro Gln Glu Leu Met Gln Leu Glu Gly Tyr Thr Val Asp Tyr  
 500 505 510  
 Thr Asp Pro His Pro Gly Leu Gln Gly Gly Cys Met Phe Phe Asn Ala  
 515 520 525  
 Val Lys Glu Gly Asp Thr Val Ile Phe Ala Ser Asp Asp Glu Gln Asp  
 530 535 540  
 Arg Ile Leu Trp Val Gln Ala Met Tyr Arg Ala Thr Gly Gln Ser Tyr  
 545 550 555 560  
 Lys Pro Val Pro Ala Ile Gln Thr Gln Lys Leu Asn Pro Lys Gly Gly  
 565 570 575  
 Thr Leu His Ala Asp Ala Gln Leu Tyr Ala Asp Arg Phe Gln Lys His  
 580 585 590  
 Gly Met Asp Glu Phe Ile Ser Ala Asn Pro Cys Lys Leu Asp His Ala  
 595 600 605  
 Phe Leu Phe Arg Ile Leu Gln Arg Gln Thr Leu Asp His Arg Leu Asn  
 610 615 620  
 Asp Ser Tyr Ser Cys Leu Gly Trp Phe Ser Pro Gly Gln Val Phe Val  
 625 630 635 640  
 Leu Asp Glu Tyr Cys Ala Arg Tyr Gly Val Arg Gly Cys His Arg His  
 645 650 655  
 Leu Cys Tyr Leu Ala Glu Leu Met Glu His Ser Glu Asn Gly Ala Val  
 660 665 670

|   |     |     |     |
|---|-----|-----|-----|
| Ile Asp Pro Thr Leu Leu His Tyr Ser Phe Ala Phe Cys Ala Ser His |     |     |     |
| 675   | 680 | 685 |     |
| Val His Gly Asn Arg Pro Asp Gly Ile Gly Thr Val Ser Val Glu Glu |     |     |     |
| 690   | 695 | 700 |     |
| Lys Glu Arg Phe Glu Glu Ile Lys Glu Arg Leu Ser Ser Leu Leu Glu |     |     |     |
| 705   | 710 | 715 | 720 |
| Asn Gln Ile Ser His Phe Arg Tyr Cys Phe Pro Phe Gly Arg Pro Glu |     |     |     |
|   | 725 | 730 | 735 |
| Gly Ala Leu Lys Ala Thr Leu Ser Leu Leu Glu Arg Val Leu Met Lys |     |     |     |
| 740   | 745 | 750 |     |
| Asp Ile Ala Thr Pro Ile Pro Ala Glu Glu Val Lys Lys Val Val Arg |     |     |     |
| 755   | 760 | 765 |     |
| Lys Cys Leu Glu Lys Ala Ala Leu Ile Asn Tyr Thr Arg Leu Thr Glu |     |     |     |
| 770   | 775 | 780 |     |
| Tyr Ala Lys Ile Glu Glu Thr Met Asn Gln Ala Ser Pro Ala Arg Lys |     |     |     |
| 785   | 790 | 795 | 800 |
| Leu Glu Glu Ile Leu His Leu Ala Glu Leu Cys Ile Glu Val Leu Gln |     |     |     |
|   | 805 | 810 | 815 |
| Gln Asn Glu Glu His His Ala Glu Ala Phe Ala Trp Trp Pro Asp Leu |     |     |     |
| 820   | 825 | 830 |     |
| Leu Ala Glu His Ala Glu Lys Phe Trp Ala Leu Phe Thr Val Asp Met |     |     |     |
| 835   | 840 | 845 |     |
| Asp Thr Ala Leu Glu Ala Gln Pro Gln Asp Ser Trp Asp Ser Phe Pro |     |     |     |
| 850   | 855 | 860 |     |
| Leu Phe Gln Leu Leu Asn Asn Phe Leu Arg Asn Asp Thr Leu Leu Cys |     |     |     |
| 865   | 870 | 875 | 880 |
| Asn Gly Lys Phe His Lys His Leu Gln Glu Ile Phe Val Pro Leu Val |     |     |     |
|   | 885 | 890 | 895 |
| Val Arg Tyr Val Asp Leu Met Glu Ser Ser Ile Ala Gln Ser Ile His |     |     |     |
| 900   | 905 | 910 |     |
| Arg Gly Phe Glu Gln Glu Thr Trp Gln Pro Val Asn Asn Gly Ser Ala |     |     |     |
| 915   | 920 | 925 |     |
| Thr Ser Glu Asp Leu Phe Trp Lys Leu Asp Ala Leu Gln Met Phe Val |     |     |     |
| 930   | 935 | 940 |     |
| Phe Asp Leu His Trp Pro Glu Gln Glu Phe Ala His His Leu Glu Gln |     |     |     |
| 945   | 950 | 955 | 960 |

|   |      |      |      |
|---|------|------|------|
| Arg Leu Lys Leu Met Ala Ser Asp Met Leu Glu Ala Cys Val Lys Arg |      |      |      |
| 965   | 970  | 975  |      |
| Thr Arg Thr Ala Phe Glu Leu Lys Leu Gln Lys Ala Ser Lys Thr Thr |      |      |      |
| 980   | 985  | 990  |      |
| Asp Leu Arg Ile Pro Ala Ser Val Cys Thr Met Phe Asn Val Leu Val |      |      |      |
| 995   | 1000 | 1005 |      |
| Asp Ala Lys Lys Gln Ser Thr Lys Leu Cys Ala Leu Asp Gly Gly Gln |      |      |      |
| 1010  | 1015 | 1020 |      |
| Glu Phe Gly Ser Gln Trp Gln Gln Tyr His Ser Lys Ile Asp Asp Leu |      |      |      |
| 1025  | 1030 | 1035 | 1040 |
| Ile Asp Asn Ser Val Lys Glu Ile Ile Leu Leu Leu Val Ser Lys Phe |      |      |      |
| 1045  | 1050 | 1055 |      |
| Val Ser Val Leu Glu Gly Val Leu Ser Lys Leu Ser Arg Tyr Asp Glu |      |      |      |
| 1060  | 1065 | 1070 |      |
| Gly Thr Phe Phe Ser Ser Ile Leu Ser Phe Thr Val Lys Ala Ala Val |      |      |      |
| 1075  | 1080 | 1085 |      |
| Lys Tyr Val Asp Val Pro Lys Pro Gly Met Asp Leu Ala Asp Thr Tyr |      |      |      |
| 1090  | 1095 | 1100 |      |
| Ile Met Phe Val Arg Gln Asn Gln Asp Ile Leu Arg Glu Lys Val Asn |      |      |      |
| 1105  | 1110 | 1115 | 1120 |
| Glu Glu Met Tyr Ile Glu Lys Leu Phe Asp Gln Trp Tyr Ser Ser Ser |      |      |      |
| 1125  | 1130 | 1135 |      |
| Met Lys Val Ile Cys Val Trp Leu Thr Asp Arg Leu Asp Leu Gln Leu |      |      |      |
| 1140  | 1145 | 1150 |      |
| His Ile Tyr Gln Leu Lys Thr Leu Ile Lys Ile Val Lys Lys Thr Tyr |      |      |      |
| 1155  | 1160 | 1165 |      |
| Arg Asp Phe Arg Leu Gln Gly Val Leu Glu Gly Thr Leu Asn Ser Lys |      |      |      |
| 1170  | 1175 | 1180 |      |
| Thr Tyr Asp Thr Val His Arg Arg Leu Thr Val Glu Glu Ala Thr Ala |      |      |      |
| 1185  | 1190 | 1195 | 1200 |
| Ser Val Ser Glu Gly Gly Gly Leu Gln Gly Ile Thr Met Lys Asp Ser |      |      |      |
| 1205  | 1210 | 1215 |      |
| Asp Glu Glu Glu Glu Gly   |      |      |      |
| 1220  |      |      |      |

&lt;210&gt; 4359

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4359

Met Asn Gln Leu Pro Ala Gly Pro Pro Val Pro Gly Ser Gly Ser Gly  
 1 5 10 15  
 Pro Leu Ala Ala Cys Pro Glu Leu Thr Ser Ala Thr Ser Pro Trp Leu  
 20 25 30  
 Gln Val Gly Thr Asn Ala Met Asp Ser Pro Leu Leu Lys Tyr Ser Ala  
 35 40 45  
 Lys Asp Tyr Phe Phe Lys Ala Ala Leu Cys His Phe Cys Ile Asp Met  
 50 55 60  
 Leu Asn Ala Lys Leu Ala Val Gln Lys Tyr Glu Glu Leu Phe Pro Ala  
 65 70 75 80  
 Phe Ser Asp Ser Arg Glu Cys Lys Leu Met Lys Lys Leu Leu Glu Ala  
 85 90 95  
 His Glu Glu Gln Asn Val Asp Ser Tyr Thr Glu Ser Val Lys Glu Tyr  
 100 105 110  
 Asp Ser Ile Ser Arg Leu Asp Gln Trp Leu Thr Thr Met Leu Leu Arg  
 115 120 125  
 Ile Lys Lys Thr Ile Gln Gly Asp Glu Glu Asp Leu Arg  
 130 135 140

&lt;210&gt; 4360

&lt;211&gt; 545

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4360

Met Glu Leu Ser Gln Lys Leu Tyr Lys Tyr Cys Pro Lys Glu Trp Lys  
 1 5 10 15

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Glu | Ala | Ser | Lys | Gly | Ile | Asp | Gln | Phe | Gly | Pro | Pro | Met | Ile | Ile |
| 20  |     |     |     |     |     |     |     | 25  |     |     |     | 30  |     |     |     |
| His | Phe | Arg | Val | Gln | Tyr | Tyr | Val | Glu | Asn | Gly | Arg | Leu | Ile | Ser | Asp |
| 35  |     |     |     |     |     |     |     | 40  |     |     |     | 45  |     |     |     |
| Arg | Ala | Ala | Arg | Tyr | Tyr | Tyr | Tyr | Trp | His | Leu | Arg | Lys | Gln | Val | Leu |
| 50  |     |     |     |     |     |     |     | 55  |     |     |     | 60  |     |     |     |
| His | Ser | Gln | Cys | Val | Leu | Arg | Glu | Glu | Ala | Tyr | Phe | Leu | Leu | Ala | Ala |
| 65  |     |     |     |     |     |     |     | 70  |     |     |     | 75  |     |     |     |
| Phe | Ala | Leu | Gln | Ala | Asp | Leu | Val | Asn | Phe | Lys | Arg | Asn | Lys | His | Tyr |
| 85  |     |     |     |     |     |     |     | 90  |     |     |     | 95  |     |     |     |
| Gly | Lys | Tyr | Phe | Glu | Pro | Glu | Ala | Tyr | Phe | Pro | Ser | Trp | Val | Val | Ser |
| 100 |     |     |     |     |     |     |     | 105 |     |     |     | 110 |     |     |     |
| Lys | Arg | Gly | Lys | Asp | Tyr | Ile | Leu | Lys | His | Ile | Pro | Asn | Met | His | Lys |
| 115 |     |     |     |     |     |     |     | 120 |     |     |     | 125 |     |     |     |
| Asp | Gln | Phe | Ala | Leu | Thr | Ala | Ser | Glu | Ala | His | Leu | Lys | Tyr | Ile | Lys |
| 130 |     |     |     |     |     |     |     | 135 |     |     |     | 140 |     |     |     |
| Glu | Ala | Val | Arg | Leu | Asp | Asp | Val | Ala | Val | His | Tyr | Tyr | Arg | Leu | Tyr |
| 145 |     |     |     |     |     |     |     | 150 |     |     |     | 155 |     |     |     |
| Lys | Asp | Lys | Arg | Glu | Ile | Glu | Ala | Ser | Leu | Thr | Leu | Gly | Leu | Thr | Met |
| 165 |     |     |     |     |     |     |     | 170 |     |     |     | 175 |     |     |     |
| Arg | Gly | Ile | Gln | Ile | Phe | Gln | Asn | Leu | Asp | Glu | Glu | Lys | Gln | Leu | Leu |
| 180 |     |     |     |     |     |     |     | 185 |     |     |     | 190 |     |     |     |
| Tyr | Asp | Phe | Pro | Trp | Thr | Asn | Val | Gly | Lys | Leu | Val | Phe | Val | Gly | Lys |
| 195 |     |     |     |     |     |     |     | 200 |     |     |     | 205 |     |     |     |
| Lys | Phe | Glu | Ile | Leu | Pro | Asp | Gly | Leu | Pro | Ser | Ala | Arg | Lys | Leu | Ile |
| 210 |     |     |     |     |     |     |     | 215 |     |     |     | 220 |     |     |     |
| Tyr | Tyr | Thr | Gly | Cys | Pro | Met | Arg | Ser | Arg | His | Leu | Leu | Gln | Leu | Leu |
| 225 |     |     |     |     |     |     |     | 230 |     |     |     | 235 |     |     |     |
| Ser | Asn | Ser | His | Arg | Leu | Tyr | Met | Asn | Leu | Gln | Pro | Val | Leu | Arg | His |
| 245 |     |     |     |     |     |     |     | 250 |     |     |     | 255 |     |     |     |
| Ile | Arg | Lys | Leu | Glu | Glu | Asn | Glu | Glu | Lys | Lys | Gln | Tyr | Arg | Glu | Ser |
| 260 |     |     |     |     |     |     |     | 265 |     |     |     | 270 |     |     |     |
| Tyr | Ile | Ser | Asp | Asn | Leu | Asp | Leu | Asp | Met | Asp | Gln | Leu | Glu | Lys | Arg |
| 275 |     |     |     |     |     |     |     | 280 |     |     |     | 285 |     |     |     |
| Ser | Arg | Ala | Ser | Gly | Ser | Ser | Ala | Gly | Ser | Met | Lys | His | Lys | Arg | Leu |
| 290 |     |     |     |     |     |     |     | 295 |     |     |     | 300 |     |     |     |

Ser Arg His Ser Thr Ala Ser His Ser Ser Ser His Thr Ser Gly Ile  
 305 310 315 320  
 Glu Ala Asp Thr Lys Pro Arg Asp Thr Gly Pro Glu Asp Ser Tyr Ser  
 325 330 335  
 Ser Ser Ala Ile His Arg Lys Leu Lys Thr Cys Ser Ser Met Thr Ser  
 340 345 350  
 His Gly Ser Ser His Thr Ser Gly Val Glu Ser Gly Gly Lys Asp Arg  
 355 360 365  
 Leu Glu Glu Asp Leu Gln Asp Asp Glu Ile Glu Met Leu Val Asp Asp  
 370 375 380  
 Pro Arg Asp Leu Glu Gln Met Asn Glu Glu Ser Leu Glu Val Ser Pro  
 385 390 395 400  
 Asp Met Cys Ile Tyr Ile Thr Glu Asp Met Leu Met Ser Arg Lys Leu  
 405 410 415  
 Asn Gly His Ser Gly Leu Ile Val Lys Glu Ile Gly Ser Ser Thr Ser  
 420 425 430  
 Ser Ser Ser Glu Thr Val Val Lys Leu Arg Gly Gln Ser Thr Asp Ser  
 435 440 445  
 Leu Pro Gln Thr Ile Cys Arg Lys Pro Lys Thr Ser Thr Asp Arg His  
 450 455 460  
 Ser Leu Ser Leu Asp Asp Ile Arg Leu Tyr Gln Lys Asp Phe Leu Arg  
 465 470 475 480  
 Ile Ala Gly Leu Cys Gln Asp Thr Ala Gln Ser Tyr Thr Phe Gly Cys  
 485 490 495  
 Gly His Glu Leu Asp Glu Glu Gly Leu Tyr Cys Asn Ser Cys Leu Ala  
 500 505 510  
 Gln Gln Cys Ile Asn Ile Gln Asp Ala Phe Pro Val Lys Arg Thr Ser  
 515 520 525  
 Lys Tyr Phe Ser Leu Asp Leu Thr His Asp Glu Val Pro Glu Phe Val  
 530 535 540  
 Val  
 545

<210> 4361

<211> 168

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4361

Met Cys Glu Pro Glu Cys Lys Thr Gln Leu Thr Ala Ser Thr Trp Arg  
 1 5 10 15  
 Ser Gly Thr Pro Gly His Thr Gly Pro Tyr Ala Gly Ser Leu Trp Asp  
 20 25 30  
 Pro Lys Pro Leu Trp Val Val Leu Gly Asp Ser Ser Ser Trp Ala Phe  
 35 40 45  
 Pro Ala Asn Cys His Arg Cys Leu Cys Tyr Ser Ala Phe Leu His Leu  
 50 55 60  
 Gly Gln Asn Asn Phe Ala Glu Ala His Arg Phe Phe Thr Glu Ile Leu  
 65 70 75 80  
 Arg Met Asp Pro Arg Asn Ala Val Ala Asn Asn Asn Ala Ala Val Cys  
 85 90 95  
 Leu Leu Tyr Leu Gly Lys Leu Lys Asp Ser Leu Arg Gln Leu Glu Ala  
 100 105 110  
 Met Val Gln Gln Asp Pro Arg His Tyr Leu His Glu Ser Val Leu Phe  
 115 120 125  
 Asn Leu Thr Thr Met Tyr Glu Leu Glu Ser Ser Arg Ser Met Gln Lys  
 130 135 140  
 Lys Gln Ala Leu Leu Glu Ala Val Ala Gly Lys Glu Gly Asp Ser Phe  
 145 150 155 160  
 Asn Thr Gln Cys Leu Lys Leu Ala  
 165

&lt;210&gt; 4362

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4362

Met Pro Gln Ala Leu Pro Cys Leu Leu Pro Cys Arg Tyr Leu Ser His  
 1 5 10 15



Thr Glu Leu Ala Pro Leu Arg Ala Pro Leu Ile Pro Met Glu His Cys  
                   20                                  25                                  30  
 Thr Thr Arg Phe Phe Glu Thr Cys Asp Leu Asp Asn Asp Lys Tyr Ile  
                   35                                  40                                  45  
 Ala Leu Asp Glu Trp Ala Gly Cys Phe Gly Ile Lys Gln Ser Glu Cys  
                   50                                  55                                  60  
 Leu Asn Lys Glu Ala Arg Gly Met Gly Arg Asn Thr Ala Pro Arg Val  
                   65                                  70                                  75                                  80  
 Leu Gly Cys His Pro Pro Thr Leu Arg Ser Leu Gly Leu Ser Val Val  
                                   85                                  90                                  95  
 Cys Pro Leu Cys Leu Ser Leu Leu Ser Leu Pro Ile  
                                   100                                  105

<210> 4363

<211> 163

<212> PRT

<213> Homo sapiens

<400> 4363

Met Ser Asn Ala Ser Phe Leu Ser Val Cys Leu Leu Ala Glu Asn Pro  
           1                                  5                                  10                                  15  
 Val Gln Leu Ser Pro Gly Cys His Gly Lys Tyr Asp Lys Glu Arg Thr  
                   20                                  25                                  30  
 Leu Gly Leu Gly Leu Lys Gly Leu Val Ile Gln Lys Thr Arg Glu Gly  
                   35                                  40                                  45  
 Cys Thr Cys Arg Val Ile Tyr Ser Arg Asn Leu Ile Lys Tyr Leu Ala  
                   50                                  55                                  60  
 His Arg Ser Tyr Lys Glu Ser Phe Gln Arg Gly Pro Leu Ala Thr Ala  
                   65                                  70                                  75                                  80  
 Gly Phe Phe Val Arg Asn Ile Cys Val Phe Phe Ile Arg Gly Asn Lys  
                                   85                                  90                                  95  
 Thr Leu Gly Lys Glu Val Ser Ile Ile Tyr Ser His Phe Ser Ser Phe  
                   100                                  105                                  110  
 Leu Asn Lys Thr Phe Ser Ser Arg Asn Thr Ala Phe Glu Gly Leu Cys

115                      120                      125  
 Phe Met Gln Pro Ala Ser Leu Val Asp Leu Phe Thr Arg Ser His Gln  
 130                      135                      140  
 Val Ile Ser Ser Ile Leu Gly Arg Trp Arg Lys Gln Thr Asp Thr Val  
 145                      150                      155                      160  
 Ser Arg Cys

<210> 4364

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4364

Met Arg Gln Met Leu Pro Glu Glu Gln Leu Lys Cys Glu Phe Leu Leu  
 1                      5                      10                      15  
 Leu Lys Val Tyr Cys Asp Ser Lys Ser Cys Phe Phe Ala Ser Glu Pro  
 20                      25                      30  
 Tyr Tyr Asn Arg Glu Gly Ser Gln Gly Pro Gln Lys Pro Met Trp Leu  
 35                      40                      45  
 Asn Lys Val Lys Thr Ser Leu Asn Glu Gln Thr Tyr Thr Arg Val Glu  
 50                      55                      60  
 Gly Phe Val Gln Asp Met Arg Leu Ile Phe His Asn His Lys Glu Phe  
 65                      70                      75                      80  
 Tyr Arg Glu Asp Lys Phe Thr Arg Leu Gly Ile Gln Val Gln Asp Ile  
 85                      90                      95  
 Phe Glu Lys Asn Phe Arg Asn Ile Phe Ala Ile Gln Glu Thr Ser Lys  
 100                      105                      110  
 Asn Ile Ile Met Phe Ile  
 115

<210> 4365

<211> 222

<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4365

Met Gly Thr Ser Ala Leu Thr Val Ser Ser Ala Leu Pro Ser Val Gly  
 1 5 10 15  
 Thr Ser Ala His Thr Leu Ser Ser Ala Leu Pro Val His Gly Asp Val  
 20 25 30  
 Cys Thr His Arg Met Ser Ser Ala Leu Pro Ser Val Asn Gly Asp Val  
 35 40 45  
 Cys Thr His Ser Val Leu Gly Thr Ala Leu Arg Gly Asp Val Cys Thr  
 50 55 60  
 His Thr Val Leu Gly Thr Ala Leu Arg Gly Asp Val Cys Thr His Ser  
 65 70 75 80  
 Val Leu Gly Thr Ala Leu Arg Lys Trp Gly Arg Leu His Ser Gln Asn  
 85 90 95  
 Val Leu Gly Thr Ala Leu Arg Gly Asp Val Cys Thr His Ser Val Leu  
 100 105 110  
 Gly Thr Ala Leu Arg Gly Asp Val Cys Thr His Ser Val Leu Gly Thr  
 115 120 125  
 Ala Leu Arg Gly Asp Val Cys Thr His Ser Val Leu Gly Thr Ala Leu  
 130 135 140  
 Arg Gly Asp Val Cys Thr His Arg Met Ser Ser Ala Leu Pro Ser Met  
 145 150 155 160  
 Gly Thr Ser Ala Leu Thr Val Ser Ser Ala Leu Pro Ser Val Gly Thr  
 165 170 175  
 Ser Ala Leu Thr Glu Cys Pro Arg His Cys Pro Pro Trp Gly Arg Leu  
 180 185 190  
 His Ser Gln Cys Pro Arg His Cys Pro Pro Gly Arg Leu His Thr Val  
 195 200 205  
 Ser Leu Ala Gln Leu Gly Leu Gly Ala Leu Ala Leu Glu Ala  
 210 215 220

&lt;210&gt; 4366

&lt;211&gt; 105

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4366

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Met Ser Ile Cys Leu Lys His Val Leu Phe Gly Ala Ala Val Ala Phe
  1             5             10             15
Leu Phe Leu Cys Ile Phe Ser Phe Ser Phe Leu Phe Phe Phe Phe
          20             25             30
Leu Phe Val Leu Arg Phe Cys Leu Asp Leu Leu Pro Arg Leu Glu Cys
          35             40             45
Ser Gly Val Ile Ser Ala His Cys Asn Leu Cys Leu Pro Gly Ser Ser
          50             55             60
Asn Cys Pro Ala Ser Ala Ser Arg Val Ala Gly Ile Thr Gly Ala Cys
          65             70             75             80
His His Ala Gln Leu Ile Phe Cys Val Leu Val Glu Thr Gly Phe His
          85             90             95

His Val Gly Arg Leu Val Ser Asn Ser
          100             105

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<210> 4367

<211> 588

<212> PRT

<213> Homo sapiens

<400> 4367

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Met Asp Leu Arg Thr Ala Val Tyr Asn Ala Ala Arg Asp Gly Lys Leu
  1             5             10             15
Gln Leu Leu Gln Lys Leu Leu Ser Gly Arg Ser Arg Glu Glu Leu Asp
          20             25             30
Glu Leu Thr Gly Glu Val Ala Gly Gly Gly Thr Pro Leu Leu Ile Ala
          35             40             45
Ala Arg Tyr Gly His Leu Val Gly Glu His Gln Ala Asp Leu Glu Val
          50             55             60
Ala Asn Arg His Gly His Thr Cys His Met Ile Ser Cys Tyr Lys Gly
          65             70             75             80

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His Arg Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn  
                     85                    90                    95  
 Arg Arg Ser Ala Lys Gly Asn Thr Ala Leu His Asp Cys Ala Glu Ser  
                     100                    105                    110  
 Gly Ser Leu Glu Ile Leu Gln Leu Leu Leu Gly Cys Lys Ala Arg Met  
                     115                    120                    125  
 Glu Arg Asp Gly Tyr Gly Met Thr Pro Leu Leu Ala Ala Ser Val Thr  
                     130                    135                    140  
 Gly His Thr Asn Ile Val Glu Tyr Leu Ile Gln Glu Gln Pro Gly Gln  
                     145                    150                    155                    160  
 Glu Gln Val Ala Gly Gly Glu Ala Gln Pro Gly Leu Pro Gln Glu Asp  
                     165                    170                    175  
 Pro Ser Thr Ser Gln Gly Cys Ala Gln Pro Gln Gly Ala Pro Cys Cys  
                     180                    185                    190  
 Ser Ser Ser Pro Glu Glu Pro Leu Asn Gly Glu Ser Tyr Glu Ser Cys  
                     195                    200                    205  
 Cys Pro Thr Ser Arg Glu Ala Ala Val Glu Ala Leu Glu Leu Pro Gly  
                     210                    215                    220  
 Ala Thr Tyr Val Asp Lys Lys Arg Asp Leu Leu Gly Ala Leu Lys His  
                     225                    230                    235                    240  
 Trp Arg Arg Ala Met Glu Leu Arg His Gln Gly Gly Glu Tyr Leu Pro  
                     245                    250                    255  
 Lys Pro Glu Pro Pro Gln Leu Val Leu Ala Tyr Asp Tyr Ser Arg Glu  
                     260                    265                    270  
 Val Asn Thr Thr Glu Glu Leu Glu Ala Leu Ile Thr Asp Pro Asp Glu  
                     275                    280                    285  
 Met Arg Met Gln Ala Leu Leu Ile Arg Glu Arg Ile Leu Gly Pro Ser  
                     290                    295                    300  
 His Pro Asp Thr Ser Tyr Tyr Ile Arg Tyr Arg Gly Ala Val Tyr Ala  
                     305                    310                    315                    320  
 Asp Ser Gly Asn Phe Glu Arg Cys Ile Arg Leu Trp Lys Tyr Ala Leu  
                     325                    330                    335  
 Asp Met Gln Gln Ser Asn Leu Glu Pro Leu Ser Pro Met Thr Ala Ser  
                     340                    345                    350  
 Ser Phe Leu Ser Phe Ala Glu Leu Phe Ser Tyr Val Leu Gln Asp Arg  
                     355                    360                    365

Ala Ala Lys Gly Ser Leu Gly Thr Gln Ile Gly Phe Ala Asp Leu Met  
 370 375 380  
 Gly Val Leu Thr Lys Gly Val Arg Glu Val Glu Arg Ala Leu Gln Leu  
 385 390 395 400  
 Pro Arg Glu Pro Gly Asp Ser Ala Gln Phe Thr Lys Ala Leu Ala Ile  
 405 410 415  
 Ile Leu His Leu Leu Tyr Leu Leu Glu Lys Val Glu Cys Thr Pro Ser  
 420 425 430  
 Gln Glu His Leu Lys His Gln Thr Val Tyr Arg Leu Leu Lys Cys Ala  
 435 440 445  
 Pro Arg Gly Lys Asn Gly Phe Thr Pro Leu His Met Ala Val Asp Lys  
 450 455 460  
 Asp Thr Thr Asn Val Gly Arg Tyr Pro Val Gly Arg Phe Pro Ser Leu  
 465 470 475 480  
 His Val Val Lys Val Leu Leu Asp Cys Gly Ala Asp Pro Asp Ser Arg  
 485 490 495  
 Asp Phe Asp Asn Asn Thr Pro Leu His Ile Ala Ala Gln Asn Asn Cys  
 500 505 510  
 Pro Ala Ile Met Asn Ala Leu Ile Glu Ala Gly Ala His Met Asp Ala  
 515 520 525  
 Thr Asn Ala Phe Lys Lys Thr Ala Tyr Glu Leu Leu Asp Glu Lys Leu  
 530 535 540  
 Leu Ala Arg Gly Thr Met Gln Pro Phe Asn Tyr Val Thr Leu Gln Cys  
 545 550 555 560  
 Leu Ala Ala Arg Ala Leu Asp Lys Asn Lys Ile Pro Tyr Lys Gly Phe  
 565 570 575  
 Ile Pro Glu Asp Leu Glu Ala Phe Ile Glu Leu His  
 580 585

<210> 4368

<211> 624

<212> PRT

<213> Homo sapiens

<400> 4368

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Cys | Met | Cys | Gln | Ala | Ser | Pro | Pro | Pro | Ala | Ala | Leu | Ala | Gly | Cys |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Leu | Leu | Ser | Ser | Cys | Val | Gln | Pro | Ala | Arg | Glu | His | Gly | Gly | Ala | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Lys | Ala | Glu | Trp | Leu | Ser | Asn | Cys | Ile | Asn | Lys | Tyr | Gly | Ser | Pro |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Tyr | Thr | Lys | Asn | Ser | Gly | Phe | Ala | Thr | Cys | Val | Gln | Asn | Leu | Pro | Asp |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gln | Cys | Thr | Pro | Asn | Pro | Cys | Asp | Arg | Lys | Gly | Thr | Gln | Ala | Cys | Gln |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Asp | Leu | Met | Gly | Asn | Phe | Phe | Cys | Leu | Cys | Lys | Ala | Gly | Trp | Gly | Gly |
|     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |     |
| Arg | Leu | Cys | Asp | Lys | Asp | Val | Asn | Glu | Cys | Ser | Gln | Glu | Asn | Gly | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Cys | Leu | Gln | Ile | Cys | His | Asn | Lys | Pro | Gly | Ser | Phe | His | Cys | Ser | Cys |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| His | Ser | Gly | Phe | Glu | Leu | Ser | Ser | Asp | Gly | Arg | Thr | Cys | Gln | Asp | Ile |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Glu | Cys | Ala | Asp | Ser | Glu | Ala | Cys | Gly | Glu | Ala | Arg | Cys | Lys | Asn |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Leu | Pro | Gly | Ser | Tyr | Ser | Cys | Leu | Cys | Asp | Glu | Gly | Phe | Ala | Tyr | Ser |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |     |
| Ser | Gln | Glu | Lys | Ala | Cys | Arg | Asp | Val | Asp | Glu | Cys | Leu | Gln | Gly | Arg |
|     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Cys | Glu | Gln | Val | Cys | Val | Asn | Ser | Pro | Gly | Ser | Tyr | Thr | Cys | His | Cys |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Asp | Gly | Arg | Gly | Gly | Leu | Lys | Leu | Ser | Gln | Asp | Met | Asp | Thr | Cys | Glu |
|     | 210 |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |
| Asp | Ile | Leu | Pro | Cys | Val | Pro | Phe | Ser | Val | Ala | Lys | Ser | Val | Lys | Ser |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Leu | Tyr | Leu | Gly | Arg | Met | Phe | Ser | Gly | Thr | Pro | Val | Ile | Arg | Leu | Arg |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |     |
| Phe | Lys | Arg | Leu | Gln | Pro | Thr | Arg | Leu | Val | Ala | Glu | Phe | Asp | Phe | Arg |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Thr | Phe | Asp | Pro | Glu | Gly | Ile | Leu | Leu | Phe | Ala | Gly | Gly | His | Gln | Asp |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     |     | 285 |     |     |

Ser Thr Trp Ile Val Leu Ala Leu Arg Ala Gly Arg Leu Glu Leu Gln  
 290 295 300  
 Leu Arg Tyr Asn Gly Val Gly Arg Val Thr Ser Ser Gly Pro Val Ile  
 305 310 315 320  
 Asn His Gly Met Trp Gln Thr Ile Ser Val Glu Glu Leu Ala Arg Asn  
 325 330 335  
 Leu Val Ile Lys Val Asn Arg Asp Ala Val Met Lys Ile Ala Val Ala  
 340 345 350  
 Gly Asp Leu Phe Gln Pro Glu Arg Gly Leu Tyr His Leu Asn Leu Thr  
 355 360 365  
 Val Gly Gly Ile Pro Phe His Glu Lys Asp Leu Val Gln Pro Ile Asn  
 370 375 380  
 Pro Arg Leu Asp Gly Cys Met Arg Ser Trp Asn Trp Leu Asn Gly Glu  
 385 390 395 400  
 Asp Thr Thr Ile Gln Glu Thr Val Lys Val Asn Thr Arg Met Gln Cys  
 405 410 415  
 Phe Ser Val Thr Glu Arg Gly Ser Phe Tyr Pro Gly Ser Gly Phe Ala  
 420 425 430  
 Phe Tyr Ser Leu Asp Tyr Met Arg Thr Pro Leu Asp Val Gly Thr Glu  
 435 440 445  
 Ser Thr Trp Glu Val Glu Val Val Ala His Ile Arg Pro Ala Ala Asp  
 450 455 460  
 Thr Gly Val Leu Phe Ala Leu Trp Ala Pro Asp Leu Arg Ala Val Pro  
 465 470 475 480  
 Leu Ser Val Ala Leu Val Asp Tyr His Ser Thr Lys Lys Leu Lys Lys  
 485 490 495  
 Gln Leu Val Val Leu Ala Val Glu His Thr Ala Leu Ala Leu Met Glu  
 500 505 510  
 Ile Lys Val Cys Asp Gly Gln Glu His Val Val Thr Val Ser Leu Arg  
 515 520 525  
 Asp Gly Glu Ala Thr Leu Glu Val Asp Gly Thr Arg Gly Gln Ser Glu  
 530 535 540  
 Val Ser Ala Ala Gln Leu Gln Glu Arg Leu Ala Val Leu Glu Arg His  
 545 550 555 560  
 Leu Arg Ser Pro Val Leu Thr Phe Ala Gly Gly Leu Pro Asp Val Pro  
 565 570 575



Val Thr Ser Ala Pro Val Thr Ala Phe Tyr Arg Gly Cys Met Thr Leu  
                   580                  585                  590  
 Glu Val Asn Arg Arg Leu Leu Asp Leu Asp Glu Ala Ala Tyr Lys His  
                   595                  600                  605  
 Ser Asp Ile Thr Ala His Ser Cys Pro Pro Val Glu Pro Ala Ala Ala  
                   610                  615                  620

<210> 4369

<211> 528

<212> PRT

<213> Homo sapiens

<400> 4369

Met Ala Thr Ala Met Asp Trp Leu Pro Trp Ser Leu Leu Leu Phe Ser  
   1                  5                  10                  15  
 Leu Met Cys Glu Thr Ser Ala Phe Tyr Val Pro Gly Val Ala Pro Ile  
                   20                  25                  30  
 Asn Phe His Gln Asn Asp Pro Val Glu Ile Lys Ala Val Lys Leu Thr  
                   35                  40                  45  
 Ser Ser Arg Thr Gln Leu Pro Tyr Glu Tyr Tyr Ser Leu Pro Phe Cys  
                   50                  55                  60  
 Gln Pro Ser Lys Ile Thr Tyr Lys Ala Glu Asn Leu Gly Glu Val Leu  
   65                  70                  75                  80  
 Arg Glu Asp Gln Glu His Thr Tyr Arg Val Val Arg Phe Glu Val Ile  
                   85                  90                  95  
 Pro Gln Ser Ile Arg Leu Glu Asp Leu Lys Ala Asp Glu Lys Ser Ser  
                   100                  105                  110  
 Cys Thr Leu Pro Glu Gly Thr Asn Ser Ser Pro Gln Glu Ile Asp Pro  
                   115                  120                  125  
 Thr Lys Glu Asn Gln Leu Tyr Phe Thr Tyr Ser Val His Trp Glu Glu  
                   130                  135                  140  
 Ser Asp Ile Lys Trp Ala Ser Arg Trp Asp Thr Tyr Leu Thr Met Ser  
   145                  150                  155                  160  
 Asp Val Gln Ile His Trp Phe Ser Ile Ile Asn Ser Val Val Val Val  
                   165                  170                  175

Phe Phe Leu Ser Gly Ile Leu Ser Met Ile Ile Ile Arg Thr Leu Arg  
 180 185 190  
 Lys Asp Ile Ala Asn Tyr Asn Lys Glu Asp Asp Ile Glu Asp Thr Met  
 195 200 205  
 Glu Glu Ser Gly Trp Lys Leu Val His Gly Asp Val Phe Arg Pro Pro  
 210 215 220  
 Gln Tyr Pro Met Ile Leu Ser Ser Leu Leu Gly Ser Gly Ile Gln Leu  
 225 230 235 240  
 Phe Cys Met Ile Leu Ile Val Ile Phe Val Ala Met Leu Gly Met Leu  
 245 250 255  
 Ser Pro Ser Ser Arg Gly Ala Leu Met Thr Thr Ala Cys Phe Leu Phe  
 260 265 270  
 Met Phe Met Gly Val Phe Gly Gly Phe Ser Ala Gly Arg Leu Tyr Arg  
 275 280 285  
 Thr Leu Lys Gly His Arg Trp Lys Lys Arg Ala Phe Cys Thr Ala Thr  
 290 295 300  
 Leu Tyr Pro Gly Val Val Phe Gly Ile Cys Phe Val Leu Asn Cys Phe  
 305 310 315 320  
 Ile Trp Gly Lys His Ser Ser Gly Ala Val Pro Phe Pro Thr Met Val  
 325 330 335  
 Ala Leu Leu Cys Met Trp Phe Gly Ile Ser Leu Pro Leu Val Tyr Leu  
 340 345 350  
 Gly Tyr Tyr Phe Gly Phe Arg Lys Gln Pro Tyr Asp Asn Pro Val Arg  
 355 360 365  
 Thr Asn Gln Ile Pro Arg Gln Ile Pro Glu Gln Arg Trp Tyr Met Asn  
 370 375 380  
 Arg Phe Val Gly Ile Leu Met Ala Gly Ile Leu Pro Phe Gly Ala Met  
 385 390 395 400  
 Phe Ile Glu Leu Phe Phe Ile Phe Ser Ala Ile Trp Glu Asn Gln Phe  
 405 410 415  
 Tyr Tyr Leu Phe Gly Phe Leu Phe Leu Val Phe Ile Ile Leu Val Val  
 420 425 430  
 Ser Cys Ser Gln Ile Ser Ile Val Met Val Tyr Phe Gln Leu Cys Ala  
 435 440 445  
 Glu Asp Tyr Arg Trp Trp Trp Arg Asn Phe Leu Val Ser Gly Gly Ser  
 450 455 460

Ala Phe Tyr Val Leu Val Tyr Ala Ile Phe Tyr Phe Val Asn Lys Leu  
 465                      470                      475                      480  
 Asp Ile Val Glu Phe Ile Pro Ser Leu Leu Tyr Phe Gly Tyr Thr Ala  
                     485                      490                      495  
 Leu Met Val Leu Ser Phe Trp Leu Leu Thr Gly Thr Ile Gly Phe Tyr  
                     500                      505                      510  
 Ala Ala Tyr Met Phe Val Arg Lys Ile Tyr Ala Ala Val Lys Ile Asp  
                     515                      520                      525

<210> 4370

<211> 165

<212> PRT

<213> Homo sapiens

<400> 4370

Met Asn His Pro Phe Gln Gly Ser His Arg Gln Thr Pro Asp Phe Gly  
   1                      5                      10                      15  
 Glu His Leu Ala Leu Leu Pro Pro Pro Pro Ser Ser Leu Pro Pro Pro  
                     20                      25                      30  
 Met Pro Phe Pro Tyr Pro Leu Pro Gln Pro Ser Pro Pro Pro Leu Phe  
                     35                      40                      45  
 Pro Pro Leu Pro Gln Asp Thr Pro Phe Phe Pro Gly Gln Pro Phe Pro  
                     50                      55                      60  
 Pro His Glu Phe Phe Asn Tyr Asn Pro Val Glu Asp Phe Ser Met Pro  
   65                      70                      75                      80  
 Pro His Leu Gly Cys Gly Pro Gly Val Asn Phe Val Pro Gly Pro Leu  
                     85                      90                      95  
 Pro Pro Pro Ile Pro Gly Pro Asn Pro His Gly Gln His Trp Gly Pro  
                     100                      105                      110  
 Val Val His Arg Gly Met Pro Arg Tyr Val Pro Asn Ser Pro Tyr His  
                     115                      120                      125  
 Val Arg Arg Met Gly Gly Pro Cys Arg Gln Arg Leu Arg His Ser Glu  
                     130                      135                      140  
 Arg Leu Ile His Thr Tyr Lys Leu Asp Arg Arg Pro Pro Ala His Ser  
   145                      150                      155                      160

Gly Thr Trp Pro Gly

165

<210> 4371

<211> 367

<212> PRT

<213> Homo sapiens

<400> 4371

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ile | Val | Arg | Pro | Ser | Thr | Ala | Thr | Trp | Asn | Ser | Pro | Thr | Met | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Trp | Pro | Leu | Leu | Leu | Leu | Leu | Ala | Val | Ser | Gly | Ala | Gln | Thr | Thr | Arg |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro | Cys | Phe | Pro | Gly | Cys | Gln | Cys | Glu | Val | Glu | Thr | Phe | Gly | Leu | Phe |
|     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |     |     |     |
| Asp | Ser | Phe | Ser | Leu | Thr | Arg | Val | Asp | Cys | Ser | Gly | Leu | Gly | Pro | His |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ile | Met | Pro | Val | Pro | Ile | Pro | Leu | Asp | Thr | Ala | His | Leu | Asp | Leu | Ser |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     | 80  |     |
| Ser | Asn | Arg | Leu | Glu | Met | Val | Asn | Glu | Ser | Val | Leu | Ala | Gly | Pro | Gly |
|     |     |     | 85  |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Tyr | Thr | Thr | Leu | Ala | Gly | Leu | Asp | Leu | Ser | His | Asn | Leu | Leu | Thr | Ser |
|     |     |     | 100 |     |     |     |     |     | 105 |     |     |     |     | 110 |     |
| Ile | Ser | Pro | Thr | Ala | Phe | Ser | Arg | Leu | Arg | Tyr | Leu | Glu | Ser | Leu | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Leu | Ser | His | Asn | Gly | Leu | Thr | Ala | Leu | Pro | Ala | Glu | Ser | Phe | Thr | Ser |
|     |     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |
| Ser | Pro | Leu | Ser | Asp | Val | Asn | Leu | Ser | His | Asn | Gln | Leu | Arg | Glu | Val |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Ser | Val | Ser | Ala | Phe | Thr | Thr | His | Ser | Gln | Gly | Arg | Ala | Leu | His | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Asp | Leu | Ser | His | Asn | Leu | Ile | His | Arg | Leu | Val | Pro | His | Pro | Thr | Arg |
|     |     |     | 180 |     |     |     |     |     | 185 |     |     |     |     | 190 |     |
| Ala | Gly | Leu | Pro | Ala | Pro | Thr | Ile | Gln | Ser | Leu | Asn | Leu | Ala | Trp | Asn |
|     |     |     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |

Arg Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg Tyr Leu  
 210 215 220  
 Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala Phe Ala  
 225 230 235 240  
 Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln Arg Leu  
 245 250 255  
 Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly Leu Gln Val  
 260 265 270  
 Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala Gly Ala Glu Val  
 275 280 285  
 Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp Leu Ser Gly Thr Asn  
 290 295 300  
 Leu Val Pro Leu Pro Glu Ala Leu Leu Leu His Leu Pro Ala Leu Gln  
 305 310 315 320  
 Ser Val Ser Val Gly Gln Asp Val Arg Cys Arg Arg Leu Val Arg Glu  
 325 330 335  
 Gly Thr Tyr Pro Arg Arg Pro Gly Ser Ser Pro Lys Val Ala Leu His  
 340 345 350  
 Cys Val Asp Thr Arg Glu Ser Ala Ala Arg Gly Pro Thr Ile Leu  
 355 360 365

<210> 4372

<211> 467

<212> PRT

<213> Homo sapiens

<400> 4372

Met Ser Ala Arg Val Pro Val Ser Leu Cys Ile Tyr Ile His Ala Cys  
 1 5 10 15  
 Val Pro Val Phe Leu Arg Val Leu Val Cys Ala Arg Val His Leu Cys  
 20 25 30  
 Val Cys Gln Ser Met Cys Ala Cys Val Cys Leu Ser Ala Tyr Pro Cys  
 35 40 45  
 Val His Val Cys Val Cys Gln Arg Ile Arg Val Cys Met Cys Val Ser  
 50 55 60

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Leu | Thr | Met | Cys | Ala | Cys | Val | Cys | Gln | Cys | Ile | Arg | Val | Cys |
| 65  |     |     |     |     | 70  |     |     |     | 75  |     |     |     |     |     | 80  |
| Ile | Cys | Val | Ser | Val | His | Val | Ser | Ala | Cys | Ala | Cys | Val | Tyr | Leu | Cys |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     | 95  |
| Val | Ser | Ile | Lys | Gly | Pro | Pro | Arg | Pro | Gly | Ala | His | Arg | Pro | Pro | Gln |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Arg | Thr | Leu | His | Cys | Ser | Asp | Ser | Ser | Ser | Asp | Thr | Asp | Ser | Phe | Tyr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     |     | 125 |     |     |
| Gly | Ala | Val | Glu | Arg | Pro | Val | Asp | Ile | Ser | Leu | Ser | Pro | Tyr | Pro | Thr |
|     | 130 |     |     |     |     | 135 |     |     |     |     |     | 140 |     |     |     |
| Asp | Asn | Glu | Asp | Tyr | Glu | His | Asp | Asp | Glu | Asp | Asp | Ser | Tyr | Leu | Glu |
| 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |     |
| Pro | Asp | Ser | Pro | Glu | Pro | Gly | Arg | Leu | Glu | Asp | Ala | Leu | Met | His | Pro |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Pro | Ala | Tyr | Pro | Pro | Pro | Pro | Val | Pro | Thr | Pro | Arg | Lys | Pro | Ala | Phe |
|     |     | 180 |     |     |     |     | 185 |     |     |     |     |     | 190 |     |     |
| Ser | Asp | Met | Pro | Arg | Ala | His | Ser | Phe | Thr | Ser | Lys | Gly | Pro | Gly | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     |     | 205 |     |     |
| Leu | Leu | Pro | Pro | Pro | Pro | Pro | Lys | His | Gly | Leu | Pro | Asp | Val | Gly | Leu |
|     | 210 |     |     |     |     |     | 215 |     |     |     |     |     | 220 |     |     |
| Ala | Ala | Glu | Asp | Ser | Lys | Arg | Asp | Pro | Leu | Cys | Pro | Arg | Arg | Ala | Glu |
| 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |
| Pro | Cys | Pro | Arg | Val | Pro | Ala | Thr | Pro | Arg | Arg | Met | Ser | Asp | Pro | Pro |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Leu | Ser | Thr | Met | Pro | Thr | Ala | Pro | Gly | Leu | Arg | Lys | Pro | Pro | Cys | Phe |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     |     | 270 |     |
| Arg | Glu | Ser | Ala | Ser | Pro | Ser | Pro | Glu | Pro | Trp | Thr | Pro | Gly | His | Gly |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     |     | 285 |     |     |
| Ala | Cys | Ser | Thr | Ser | Ser | Ala | Ala | Ile | Met | Ala | Thr | Ala | Thr | Ser | Arg |
|     | 290 |     |     |     |     | 295 |     |     |     |     |     |     | 300 |     |     |
| Asn | Cys | Asp | Lys | Leu | Lys | Ser | Phe | His | Leu | Ser | Pro | Arg | Gly | Pro | Pro |
| 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |     |
| Thr | Ser | Glu | Pro | Pro | Pro | Val | Pro | Ala | Asn | Lys | Pro | Lys | Phe | Leu | Lys |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Ile | Ala | Glu | Glu | Asp | Pro | Pro | Arg | Glu | Ala | Ala | Met | Pro | Gly | Leu | Phe |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     |     | 350 |     |

Val Pro Pro Val Ser Pro Arg Pro Pro Ala Leu Lys Leu Pro Val Pro  
           355                    360                    365  
 Glu Ala Met Ala Arg Pro Ala Val Leu Pro Arg Pro Glu Lys Pro Gln  
       370                    375                    380  
 Leu Pro His Leu Gln Arg Ser Pro Pro Asp Gly Gln Ser Phe Arg Ser  
 385                    390                    395                    400  
 Phe Ser Phe Glu Lys Pro Arg Gln Pro Ser Gln Ala Asp Thr Gly Gly  
                     405                    410                    415  
 Asp Asp Ser Asp Glu Asp Tyr Glu Lys Val Pro Leu Pro Asn Ser Val  
           420                    425                    430  
 Phe Val Asn Thr Thr Glu Ser Cys Glu Val Glu Arg Ser Ala Gln Ser  
           435                    440                    445  
 Pro Val Cys Ala Gly Ser Ser Ala Met Pro Gly Phe Leu Leu Leu Cys  
       450                    455                    460  
 Pro Ser His  
 465

<210> 4373

<211> 1004

<212> PRT

<213> Homo sapiens

<400> 4373

Met Glu Val Thr Asp Arg Lys Cys Ser Glu Leu Leu Tyr Val Phe Gln  
   1                    5                    10                    15  
 Thr Gln Leu Ala Leu Lys Leu Leu Gln Cys Leu Lys Val Thr Asp Ala  
           20                    25                    30  
 Pro His Phe Tyr Gly Leu Pro Ser Leu Glu Arg Thr Leu Arg Gly Met  
           35                    40                    45  
 Ala Asn Leu Thr Ala Phe Pro Gly Trp Ser Ser His Ser Pro Leu Thr  
           50                    55                    60  
 Lys Pro Leu Asp Ile Cys Val Lys Tyr Leu Ser Gly Leu Leu Glu Val  
   65                    70                    75                    80  
 Ile Thr Ser Phe Tyr Val Glu Arg Gly Gly Asn Ala Met Ser Phe Met

|   |     |     |     |
|---|-----|-----|-----|
|   | 85  | 90  | 95  |
| Gly Lys Gly Val Thr Lys Ser Thr Ile Leu Cys Leu Leu His Leu Ser |     |     |     |
|   | 100 | 105 | 110 |
| His Glu Met Met Ala Gln Ala Gly Ser Leu Glu Trp Met Ser Leu Trp |     |     |     |
|   | 115 | 120 | 125 |
| Phe Leu Pro Leu Gly Ser His Ser Glu Glu His Ile Pro Thr Gln Gln |     |     |     |
|   | 130 | 135 | 140 |
| Gly Leu Ala Trp Leu Ile Pro Leu Trp Val Asp Arg Asp Pro Glu Val |     |     |     |
| 145   | 150 | 155 | 160 |
| Arg Phe Thr Ser Leu Gly Leu Gly Ser Ala Leu Thr Thr Leu Glu Thr |     |     |     |
|   | 165 | 170 | 175 |
| Gly Cys Val Ala Leu Ala Asn Ser Cys Gln Asn Ile Ser Gly Gly Leu |     |     |     |
|   | 180 | 185 | 190 |
| Trp Gly Thr Val Val Asn Ile Leu Leu Asp Gln Ser Glu Cys Ser Met |     |     |     |
|   | 195 | 200 | 205 |
| Val Arg Arg Glu Ala Ala Phe Ile Leu Gln Asn Leu Leu Val Ile Pro |     |     |     |
|   | 210 | 215 | 220 |
| Met Pro Thr Glu Ile Ile Lys Asp Tyr Thr Trp Gln Gly Pro Cys Val |     |     |     |
| 225   | 230 | 235 | 240 |
| His Asp Glu Asp Ser Gly Leu Ser Leu Ile Gly Lys Pro Ala Leu Gln |     |     |     |
|   | 245 | 250 | 255 |
| Ala Leu Leu Tyr His Cys His Phe Tyr Glu His Leu Asn Gln Met Val |     |     |     |
|   | 260 | 265 | 270 |
| Lys His Cys Tyr Leu Gly Arg Cys Met Phe Asp Leu Asn Phe Ser Ala |     |     |     |
|   | 275 | 280 | 285 |
| Phe Asp Arg Asn Ser Glu Ser Asn Asp Leu Asn Gly Leu Asp Asp Ser |     |     |     |
|   | 290 | 295 | 300 |
| Phe Lys Phe Trp Arg Ala Pro Ser Arg Thr Ser Gln Asp Arg Asp Pro |     |     |     |
| 305   | 310 | 315 | 320 |
| Ser Ser Leu Ser Thr Ser Glu Thr Thr Val Ala Pro Ser Leu Gly Ser |     |     |     |
|   | 325 | 330 | 335 |
| Thr Glu Phe Gln Pro Leu Val Gln Ser Thr Thr Leu Leu Pro Glu Ala |     |     |     |
|   | 340 | 345 | 350 |
| Ser His Asp Gln Phe Val Ala Gln Gly His Gln Glu Gly Thr Ser Pro |     |     |     |
|   | 355 | 360 | 365 |
| Arg Pro Pro His Asp Ser Ser Leu Ser Ala Pro Leu Pro Lys Leu Cys |     |     |     |



|   |     |     |     |
|---|-----|-----|-----|
| 370   | 375 | 380 |     |
| Val Phe Val Thr Pro Ser Leu Leu Ser Ala Met Cys Ser Leu Leu Asp |     |     |     |
| 385   | 390 | 395 | 400 |
| Asn Leu Leu Thr Ile Ala Pro Arg Asp Thr Ala Lys Ala Phe Arg Gln |     |     |     |
| 405   | 410 | 415 |     |
| Ala His Leu Ile Glu Leu Leu Cys Ser Ile Ala Asp Ala Thr Leu Ile |     |     |     |
| 420   | 425 | 430 |     |
| Gln Thr Cys Val Gln Glu Leu Arg Ala Leu Leu Pro Ser Ser Pro Pro |     |     |     |
| 435   | 440 | 445 |     |
| Ala Glu His Thr Gln Ala Gln Val Ser Phe Leu Leu Glu Tyr Leu Ser |     |     |     |
| 450   | 455 | 460 |     |
| Ser Leu Ser Arg Leu Leu Gln Ser Cys Leu Leu Val Glu Pro Asp Leu |     |     |     |
| 465   | 470 | 475 | 480 |
| Val Ile Gln Asp Glu Leu Val Lys Pro Leu Ile Thr Asn Ile Ile Gly |     |     |     |
| 485   | 490 | 495 |     |
| Ile Leu Thr Ile Cys Thr Lys Asp Val Leu Asp Lys Glu Leu Ile Ser |     |     |     |
| 500   | 505 | 510 |     |
| Ala Phe Tyr His Thr Trp Thr His Leu Phe Asn Leu Leu Ala Met Leu |     |     |     |
| 515   | 520 | 525 |     |
| Leu Arg Lys Ala Gly Ala Ile Thr Leu Pro Ser Val Thr Val Ala Leu |     |     |     |
| 530   | 535 | 540 |     |
| Ala Lys His Trp Thr Ala Ala Ile Asp Met Phe Cys Thr Cys Ala Gly |     |     |     |
| 545   | 550 | 555 | 560 |
| Leu Ser Ala Thr Cys Pro Ala Leu Tyr Thr Ala Ser Leu Gln Phe Leu |     |     |     |
| 565   | 570 | 575 |     |
| Ser Val Leu Leu Thr Glu Glu Ala Lys Gly His Leu Gln Ala Lys Ser |     |     |     |
| 580   | 585 | 590 |     |
| Lys Thr His Leu Cys Cys Ser Pro Thr Val Ala Ser Leu Leu Asp Asp |     |     |     |
| 595   | 600 | 605 |     |
| Ser Gln Glu Asn Gln Lys Ser Leu Glu Gln Leu Ser Asp Val Ile Leu |     |     |     |
| 610   | 615 | 620 |     |
| Gln Cys Tyr Glu Gly Lys Ser Ser Lys Asp Ile Leu Lys Arg Val Ala |     |     |     |
| 625   | 630 | 635 | 640 |
| Ala Asn Ala Leu Met Ser Leu Leu Ala Val Ser Arg Arg Ala Gln Lys |     |     |     |
| 645   | 650 | 655 |     |
| His Ala Leu Lys Ala Asn Leu Ile Asp Asn Cys Met Glu Gln Met Lys |     |     |     |

|   |     |     |
|---|-----|-----|
| 660   | 665 | 670 |
| His Ile Asn Ala Gln Leu Asn Leu Asp Ser Leu Arg Pro Gly Lys Ala |     |     |
| 675   | 680 | 685 |
| Ala Leu Lys Lys Lys Glu Asp Gly Val Ile Lys Glu Leu Ser Ile Ala |     |     |
| 690   | 695 | 700 |
| Met Gln Leu Leu Arg Asn Cys Leu Tyr Gln Asn Glu Glu Cys Lys Glu |     |     |
| 705   | 710 | 715 |
| Ala Ala Leu Glu Ala His Leu Val Pro Val Leu His Ser Leu Trp Pro |     |     |
| 725   | 730 | 735 |
| Trp Ile Leu Met Asp Asp Ser Leu Met Gln Ile Ser Leu Gln Leu Leu |     |     |
| 740   | 745 | 750 |
| Cys Val Tyr Thr Ala Asn Phe Pro Asn Gly Cys Ser Ser Leu Cys Trp |     |     |
| 755   | 760 | 765 |
| Ser Ser Cys Gly Gln His Pro Val Gln Ala Thr His Arg Gly Ala Val |     |     |
| 770   | 775 | 780 |
| Ser Asn Ser Leu Met Leu Cys Ile Leu Lys Leu Ala Ser Gln Met Pro |     |     |
| 785   | 790 | 795 |
| Leu Glu Asn Thr Thr Val Gln Gln Met Val Phe Met Leu Leu Ser Asn |     |     |
| 805   | 810 | 815 |
| Leu Ala Leu Ser His Asp Cys Lys Gly Val Ile Gln Lys Ser Asn Phe |     |     |
| 820   | 825 | 830 |
| Leu Gln Asn Phe Leu Ser Leu Ala Leu Pro Lys Gly Gly Asn Lys His |     |     |
| 835   | 840 | 845 |
| Leu Ser Asn Leu Thr Ile Leu Trp Leu Lys Leu Leu Leu Asn Ile Ser |     |     |
| 850   | 855 | 860 |
| Ser Gly Glu Asp Gly Gln Gln Met Ile Leu Arg Leu Asp Gly Cys Leu |     |     |
| 865   | 870 | 875 |
| Asp Leu Leu Thr Glu Met Ser Lys Tyr Lys His Lys Ser Ser Pro Leu |     |     |
| 885   | 890 | 895 |
| Leu Pro Leu Leu Ile Phe His Asn Val Cys Phe Ser Pro Ala Asn Lys |     |     |
| 900   | 905 | 910 |
| Pro Lys Ile Leu Ala Asn Glu Lys Val Ile Thr Val Leu Ala Ala Cys |     |     |
| 915   | 920 | 925 |
| Leu Glu Ser Glu Asn Gln Asn Ala Gln Arg Ile Gly Ala Ala Ala Leu |     |     |
| 930   | 935 | 940 |
| Trp Ala Leu Ile Tyr Asn Tyr Gln Lys Ala Lys Thr Ala Leu Lys Ser |     |     |

945                      950                      955                      960  
 Pro Ser Val Lys Arg Arg Val Asp Glu Ala Tyr Ser Leu Ala Lys Lys  
                          965                      970                      975  
 Thr Phe Pro Asn Ser Glu Ala Asn Pro Leu Asn Ala Tyr Tyr Leu Lys  
                          980                      985                      990  
 Cys Leu Glu Asn Leu Val Gln Leu Leu Asn Ser Ser  
                          995                      1000

<210> 4374

<211> 550

<212> PRT

<213> Homo sapiens

<400> 4374

Met Gly Trp Ser Asp Leu Gln Pro Ala Met Gly Gly Glu Ala Glu Arg  
   1                      5                      10                      15  
 Phe Gln Ala Gln Leu Glu Val Lys Leu Val Thr Gly Gly Ser Pro Val  
                          20                      25                      30  
 Val Phe Thr Gly Asn Leu Thr Arg Gln Val Gly Ser Lys Leu Ala Phe  
                          35                      40                      45  
 Ser Ala Ser Leu Ser His Leu Leu Ser Asp Gln Ala Asn Val Thr Ala  
                          50                      55                      60  
 Leu Leu Glu Arg Lys Glu Glu Asn Gly Arg Arg Val Ala Ala Leu Gly  
                          65                      70                      75                      80  
 Ala Glu Leu Phe Val Pro Gly Leu Val Gly Leu Arg Ala Leu Gly Leu  
                          85                      90                      95  
 Leu Gln Gln Gln Gly Gln Leu Trp Thr Asn Ser Leu Arg Ile Gln Tyr  
                          100                      105                      110  
 Ser Leu Leu Gly Gln Ala Lys Gln Ala Ala His Glu Cys Ser Thr Ser  
                          115                      120                      125  
 Gln Lys Leu Arg Ala Asp Ser Gly Ser Asp Gly Ala Tyr Arg Leu Glu  
                          130                      135                      140  
 Leu Arg His Glu Leu His Cys Thr Gln Ile Leu Ala Phe Ser His Lys  
                          145                      150                      155                      160  
 Val Gln Leu Trp His Glu Glu Asp Ser Gly His Leu His Ser Gln Leu

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 165 |     | 170 |     | 175 |
| Glu Val Ser Tyr Gly Lys Gln Trp Asp Lys Asn Ser Asn Lys Arg His |     |     |     |     |     |
|   | 180 |     | 185 |     | 190 |
| Leu Arg Val Ser Gln Thr Phe Lys Asn Asp Ser Gly Pro Ala Leu Ser |     |     |     |     |     |
|   | 195 |     | 200 |     | 205 |
| Asn His Phe Met Glu Phe Val Leu Gln Val Pro Glu Arg Gln Val Asp |     |     |     |     |     |
|   | 210 |     | 215 |     | 220 |
| Cys Arg Val Gln Leu Tyr His Leu Ser Leu Arg Leu Pro Tyr Val Glu |     |     |     |     |     |
| 225   |     | 230 |     | 235 | 240 |
| Ser Ser Ser His Leu Lys Val Gln Tyr Asn Gly Arg Pro Leu Phe Val |     |     |     |     |     |
|   | 245 |     | 250 |     | 255 |
| Ala Gly Gly Gln Trp Lys Asp Thr Ser Arg Ala Thr Leu Trp Lys Trp |     |     |     |     |     |
|   | 260 |     | 265 |     | 270 |
| Glu Gly Val Leu Asn Leu Asp Ser Pro Trp Leu Met Val Ser Ala Ala |     |     |     |     |     |
|   | 275 |     | 280 |     | 285 |
| His Arg Leu Tyr Trp Pro His Arg Ala Val Phe Gln Ala Val Leu Glu |     |     |     |     |     |
|   | 290 |     | 295 |     | 300 |
| Leu Thr Leu Gly Lys Ala Trp Thr Leu Lys Asp Leu Val Val Ser Val |     |     |     |     |     |
| 305   |     | 310 |     | 315 | 320 |
| Gly Cys Arg Ser Gln Gly Pro Asn Arg Glu Gly Lys Ile Gln Val Tyr |     |     |     |     |     |
|   | 325 |     | 330 |     | 335 |
| Thr Ala Ala Thr Thr Tyr Leu Arg Val Ser Thr Val Thr Val Leu Ala |     |     |     |     |     |
|   | 340 |     | 345 |     | 350 |
| Gln Ser Leu Phe His Ser Trp Ser Glu Leu Glu Ser Ala Trp Asn Thr |     |     |     |     |     |
|   | 355 |     | 360 |     | 365 |
| Ala Val Gln Gly Glu Ile His Ala Glu Asn Ser Arg Asp Arg Lys Ile |     |     |     |     |     |
|   | 370 |     | 375 |     | 380 |
| Leu Asn Cys Trp Leu Lys Gly Pro Gln Gln Glu Leu Asn Leu Thr Ala |     |     |     |     |     |
| 385   |     | 390 |     | 395 | 400 |
| Ala Tyr Arg His Leu Glu Trp Pro Arg Lys Thr Gln Val Ser Leu Thr |     |     |     |     |     |
|   | 405 |     | 410 |     | 415 |
| Ala Val Trp Ile Gly Ala Gln Gly Gln Pro Arg Gly Leu Gln Leu Glu |     |     |     |     |     |
|   | 420 |     | 425 |     | 430 |
| Gly Glu Leu Glu Glu Leu Arg Gln Asp Arg Thr Leu Tyr Arg Lys Arg |     |     |     |     |     |
|   | 435 |     | 440 |     | 445 |
| Gly Ala Leu Leu Leu Arg His Pro Leu His Leu Pro Ile Pro Gln Ser |     |     |     |     |     |

450                      455                      460  
 Leu Leu Leu Gln Glu Thr Phe Thr Ala Asp Arg Arg His Gln Arg Tyr  
 465                      470                      475                      480  
 Ser Leu Glu Thr Arg Val Val Leu Asn Gly Arg Glu Glu Thr Leu Gln  
                     485                      490                      495  
 Thr Met Val Leu Gly Cys Gln Ala Gly His Pro Tyr Val Cys Ala Gly  
                     500                      505                      510  
 Leu Met His Pro Tyr Asp Gly Lys Val Ile Pro Arg Asn Thr Glu Gly  
                     515                      520                      525  
 Cys Leu Val Thr Trp Asn Gln His Thr Ser Leu Ala Leu Leu Ser Gly  
                     530                      535                      540  
 Leu Glu Ser Gly Val Gln  
 545                      550

<210> 4375

<211> 147

<212> PRT

<213> Homo sapiens

<400> 4375

Met Gln Ala Pro Ile Pro Pro Pro Glu Pro Phe Cys Ala Ser Ser Gly  
   1                      5                      10                      15  
 Pro Pro Cys Trp Ser Thr Phe Ser Arg Lys Leu Ser Gln Ala Arg Pro  
                     20                      25                      30  
 Val Lys Leu Ser Phe Leu Pro Gln Ser Ser Leu Ala Pro Pro Ala His  
                     35                      40                      45  
 Thr Ala His Gln Ala Leu Ala Leu Arg Pro Gln Pro Ala Ser His Arg  
                     50                      55                      60  
 Val Gly Pro Phe Leu Pro Gln Pro Gly Gln Gly Thr Ser Ser Val Ile  
   65                      70                      75                      80  
 Ser His Thr Pro Ser Thr Ala Arg Ile Ala Gly Ala His Ile Gly Leu  
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 His Thr Gly Pro Trp Leu Leu Leu Leu Pro Gly Trp Ala Gly Arg Gln  
                     100                      105                      110  
 Gly Pro Gly Trp Ala Trp Gly Gly Ser Ser Leu Trp Ala Gly Leu Thr

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<212> PRT

<213> Homo sapiens

<400> 4376

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 20                      25                      30  
 Gly Lys Arg Ala Gln Gly Gly Cys Arg Leu Leu Thr Ala Cys Leu Asp  
 35                      40                      45  
 Arg Pro His Gly Ala Ser Pro His Ile Ala Arg Ala Leu Ala Ser Pro  
 50                      55                      60  
 Leu Pro Thr Cys Lys Arg Gly Cys Trp Gln Gln His Phe Thr Thr Arg  
 65                      70                      75                      80  
 Asn Leu Tyr Ser Asn Ser Lys His Ala Leu Thr His Ser Val Asn Tyr  
 85                      90                      95  
 Pro Leu Ser Trp Pro Thr Glu Val Asp Ser Phe Arg Pro Pro Phe Val  
 100                      105                      110  
 Gln Met Arg Lys Leu Arg Leu Thr Pro Lys Pro Gly Gly Phe Gln Met  
 115                      120                      125  
 Trp Ser Gly Ser Leu Cys Pro Gly Asp Glu Gly Thr Arg Arg Val Trp  
 130                      135                      140  
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 145                      150                      155                      160  
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&lt;210&gt; 4377

&lt;211&gt; 1965

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4377

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<211> 2607

<212> DNA

<213> Homo sapiens

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<211> 2080

<212> DNA

<213> Homo sapiens

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<212> DNA

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<211> 2419

<212> DNA

<213> Homo sapiens

<400> 4381

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<211> 2220

<212> DNA

<213> Homo sapiens

<400> 4382

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<213> Homo sapiens

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<211> 2138

<212> DNA

<213> Homo sapiens

<400> 4384

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<212> DNA

<213> Homo sapiens

<400> 4386

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4388

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4389

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4391

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<213> Homo sapiens

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&lt;211&gt; 2012

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4401

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<212> DNA

<213> Homo sapiens

<400> 4406

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<211> 2931

<212> DNA

<213> Homo sapiens

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<211> 2378

<212> DNA

<213> Homo sapiens

<400> 4408

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<211> 3070

<212> DNA

<213> Homo sapiens

<400> 4409

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<211> 3158

<212> DNA

<213> Homo sapiens

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<213> Homo sapiens



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&lt;213&gt; Homo sapiens

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&lt;400&gt; 4416

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<212> DNA

<213> Homo sapiens

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<211> 2319

<212> DNA

<213> Homo sapiens

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<211> 2500

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<211> 2976

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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&lt;211&gt; 2884

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4441

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&lt;211&gt; 1807

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4444

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<211> 1950

<212> DNA

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4449

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<213> Homo sapiens

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<213> Homo sapiens

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<213> Homo sapiens

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<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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<213> Homo sapiens

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<211> 2218

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4480

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<212> DNA

<213> Homo sapiens

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<211> 1907

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<211> 2010

<212> DNA

<213> Homo sapiens

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&lt;211&gt; 1996

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4500

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<211> 1809

<212> DNA

<213> Homo sapiens

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<211> 2410

<212> DNA

<213> Homo sapiens

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<212> DNA

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<211> 1713

<212> DNA

<213> Homo sapiens

<400> 4505

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<211> 3620

<212> DNA

<213> Homo sapiens

<400> 4510

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<211> 3063

<212> DNA

<213> Homo sapiens

<400> 4536

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<212> DNA

<213> Homo sapiens

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<211> 4066

<212> DNA

<213> Homo sapiens

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<212> DNA

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<212> DNA

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<211> 2856

<212> DNA

<213> Homo sapiens

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<211> 3523

<212> DNA

<213> Homo sapiens

<400> 4551

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<211> 2216

<212> DNA

<213> Homo sapiens

<400> 4552

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<211> 3065

<212> DNA

<213> Homo sapiens

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| ctcccacgcc  | atcttcacca  | tccacctgtg  | ccagatgcgc  | atgtgcaccc  | agcccagact  | 180  |
| ggigaatgag  | gcggtgactg  | ggcttccctga | tggtaacact  | ccctcgagtg  | agtatgagac  | 240  |
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<213> Homo sapiens

<400> 4555

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<211> 2737

<212> DNA

<213> Homo sapiens

<400> 4556

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<211> 2321

<212> DNA

<213> Homo sapiens

<400> 4557

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<211> 2297

<212> DNA

<213> Homo sapiens

<400> 4558

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<211> 2107

<212> DNA

<213> Homo sapiens

<400> 4559



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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4560

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4561

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<213> Homo sapiens

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<211> 2109

<212> DNA

<213> Homo sapiens

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&lt;211&gt; 1783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4564

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<211> 3686

<212> DNA

<213> Homo sapiens

<400> 4566

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<211> 3089

<212> DNA

<213> Homo sapiens

<400> 4567

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<211> 3859

<212> DNA

<213> Homo sapiens

<400> 4568

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| agagcagggt gaagtaacat ttctgtact gagacttgca ccctgtgat tctcactcat     | 240  |
| cccaaattct gcatgtggat ggtaagtatc aaaaactttg cctatgccac ataaaggaaa   | 300  |
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<211> 3003

<212> DNA

<213> Homo sapiens

<400> 4569

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<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

<400> 4578

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&lt;400&gt; 4579

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<211> 2309

<212> DNA

<213> Homo sapiens

<400> 4580

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<211> 1848

<212> DNA

<213> Homo sapiens

<400> 4581

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<212> DNA

<213> Homo sapiens

<400> 4582

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<211> 3010

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4583

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<212> DNA

<213> Homo sapiens

<400> 4584

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<211> 1919

<212> DNA

<213> Homo sapiens

<400> 4585

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<210> 4586

<211> 2184

<212> DNA

<213> Homo sapiens

<400> 4586

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&lt;211&gt; 1946

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4587

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<212> DNA

<213> Homo sapiens

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4589

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<212> DNA

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<400> 4594

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&lt;213&gt; Homo sapiens

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<211> 2270

<212> DNA

<213> Homo sapiens

<400> 4636

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<211> 1935

<212> DNA

<213> Homo sapiens

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<211> 3016

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

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